

# THE BUILDING BLOCKS *of Flavor*

*A familiar icon helps illustrate the levels of flavor development and perception*

**C**learly, the food consumer is driven by flavor. The way food tastes determines purchasing patterns at the grocery store and in foodservice operations. To truly know our customers is to understand how they approach flavor and the dynamics they use when tasting food and beverages.

But first, we must understand what drives our eating habits. Obviously, we must eat for fuel. The body needs essential food and fluids for the energy required to make it through the day. Second, healthy eating is crucial for a healthy life, and every day we learn more and more

about the benefits of eating nutritious foods. Third, food is social: Many of us share a meal with friends and family in an ancient form of fellowship wherein the meal is a sacred shared experience. Finally, for most of us, eating provides a positive and pleasurable emotional experience.

But it is flavor that is the ultimate determining factor driving our eating habits, influencing our selection of foods and beverages, consciously or not.

Flavor, though, is difficult to define. It is often abstract, and it is always personal. Although culinary

## QUICK-TAKE

THIS STORY TAKES A LOOK AT:

- ▶... The Flavor Pyramid: a simple way to deconstruct the complex art and science of building flavor
- ▶... The six levels of The Flavor Pyramid
- ▶... Ways to use The Flavor Pyramid for building a flavor vocabulary, training staff and enhancing menu research and development

schools and cooking programs proliferate, the subject of flavor — how it is developed and understood — has been largely overlooked within the food industry. There is not one complete resource centered on flavor. No tools exist to develop flavor other than cookbooks. Understanding flavor should start well before recipes are prepared or even developed.

This gap in our culinary world is the basis for the creation of The Flavor Pyramid™, a tool for understanding every aspect of flavor. The Flavor Pyramid is a visual form and system that defines flavor and all of its attributes. It provides a means for understanding how to build complex and satisfying flavors, how to encourage flavor exploration and new taste experiences and how to educate professionals and consumers on:

- How we taste and experience flavor
- The science of flavor
- The flavor components of various world cuisines
- The building blocks of complex flavor
- How to evaluate flavor
- How to create big, bold flavors

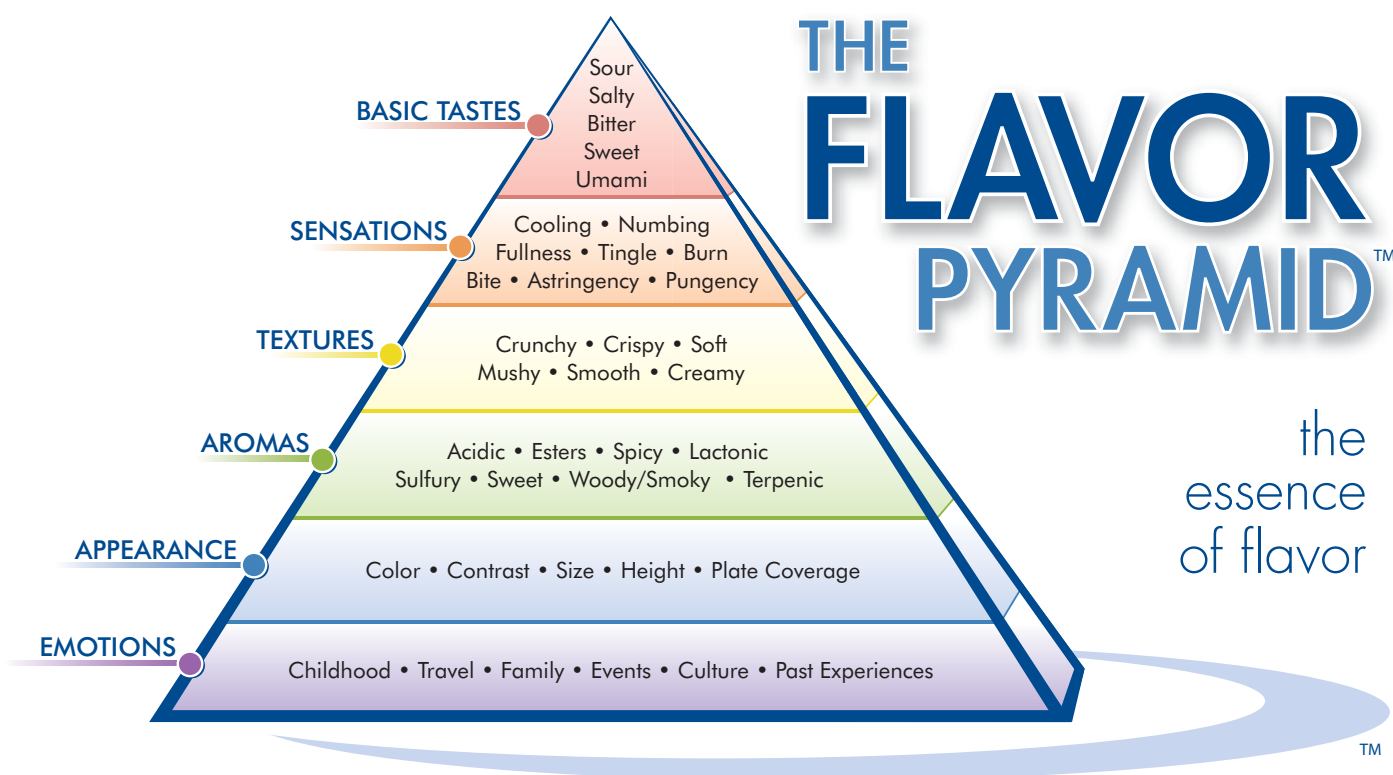
## BUILDING THE FLAVOR PYRAMID

The pyramid is a recognizable, easily understood icon that has been used for centuries as a symbol conveying a hierarchy, and now used to represent dietary requirements.

The definition of a pyramid is a triangular form that builds from a supporting foundation. The bottom building blocks are central to all other blocks, and nothing can be added until the base blocks are established. The pyramid builds upward, ultimately reaching a pinnacle.

The goal here was to create a pyramid tool that would make the concept of flavor simple and easy to use while still recognizing the complexity of flavor's science and art.

The Flavor Pyramid deconstructs flavor into six essential levels: Emotional Perceptions, Visual Appearance, Aromas, Textures, Sensations and Basic Tastes. The more levels that are included in our tasting experiences, the more complex and satisfying the flavor will be.



# THE FLAVOR PYRAMID: LAYER BY LAYER

## IT BEGINS WITH EMOTIONS

Emotional Perceptions make up the base of The Flavor Pyramid. This layer includes the predispositions we bring to every eating experience, influenced by past tasting experiences, family background, travel, cultural and anthropological influences and other psychological factors. All of our tasting experiences start in childhood, when our first encounters with food were powerful and distinct. We may have been forced to eat our broccoli at an early age and therefore dislike its green vegetable taste and sharp aroma. Later in life, we may have been exposed to a delicious broccoli stir-fry with garlic and ginger. We bring these memories to the table, and before even seeing broccoli on our plate, we have some predisposed idea as to how broccoli will taste and whether or not we will like it. These predisposed emotional perceptions are the foundation for how we taste.



SEASONS 52

We bring memories, emotions and past tasting experiences to the table; each influences every new encounter with food and flavor.

## ALL EYES ON FLAVOR: VISUAL APPEARANCE

The next layer in the pyramid is Visual Appearance. Visual attributes include color, contrast, size, height, plate coverage and more. We have all heard the cliché that we “eat with our eyes.” To test this theory, taste food and beverages blindfolded and see whether you can distinguish cauliflower from broccoli or smoked salmon from smoked trout without a visual hint. Or test your wine savviness; even many experts have trouble tasting the difference between Chardonnay and Pinot Noir when blind tasted at the same temperature. Conversely, many operators report that when they include pictures of their food on their menu, sales of those menu offerings increase significantly.

Additionally, color plays an important visual role as an anticipator of what we are about to eat. Dull green produce looks as if it lacks freshness while bright red tomatoes appear ripe and juicy. Pale chicken looks bland while a golden crust looks crunchy and delicious. Diners are easily turned on or off by color before they have a single taste.



OCEAN GARDEN PRODUCTS

Bright green visually conveys freshness and good flavor.

## THE NOSE KNOWS: AROMAS

Continuing up the pyramid, the next level is Aromas. Aromas are invisible gases that travel up our olfactory system where receptors capture the sensation. The same is true when we taste food and beverages in our mouth. As we chew, gases are released into the back of our mouth, called the retro-nasal passage, to the same olfactory system. Most of our reactions to flavor are due to our olfactory system.

Aromatic notes include acidic, esters, spicy, lactic, sulfury, sweet, woody, smoky and terpenic. These aromas arrive into our olfactory system long before we first taste. We all know the anticipation of walking into a bakery or a coffee house. The aromas of grains baking or of roasted coffee whet our appetite before the flavor hits our mouth. The aroma level is critical to defining flavor. To best illustrate aroma's importance, consider your last head cold. Your sinuses were blocked and you couldn't smell a thing. Or, hold your nose and take a spoonful of chicken noodle soup. You may note that the tactile sensation is wet, but the taste is diminished to just a bit of salt and some soft textures.

Although aroma precedes taste, aroma and taste ultimately work in tandem to tell our senses what we experience. Many people complain that they cannot taste certain foods when, in fact, they probably cannot smell the foods, which makes it difficult, if not impossible, to detect flavors.



Strong aromas, like those of roasted coffee and fresh-baked bread, whet the appetite.

## MORE THAN A FEELING: TEXTURE

Once the food or beverage is in our mouth, the next sensation to kick in is Texture. The attributes of texture are crunchy, crispy, soft, firm, mushy, smooth, creamy, etc. Each contributes to a different taste sensation and many can be present in the same dish. The layered textural elements extend the flavor beyond the initial taste sensation.

Even though texture does not have a flavor, texture gives us cues to what we should taste. For instance, if ice cream is crunchy, we know that it was frozen to an undesirable temperature. Pasta with a slight give against our teeth is cooked al dente. Mushy fruit indicates that it's past its prime.



NATIONAL PEANUT BOARD

Textures provide the diner with cues about how the food should taste.

## TASTE THE FEEL: SENSATIONS

Sensations make up the next layer of the pyramid. These sensations include, burn, bite, astringency, pungency, cooling, numbing, fullness and tingle. Some of the most pronounced examples of flavor sensations are how pepper can make us sneeze, hot chiles can make us sweat, a lemon makes us pucker and a cool glass of milk can extinguish the fire caused by spicy foods. The taste receptors on our tongue are the first to distinguish these sensations and cause involuntary physical reactions.



The burn of a chile is a pronounced example of sensation.

## THE BIG MATTER OF TASTE

The final building block in The Flavor Pyramid is our Basic Tastes. These include salty, sour, sweet, bitter and umami (savory). These basic tastes are key to understanding flavor and are the tastes upon which secondary flavors can be layered to create complex flavor. When chefs refer to a "balanced sauce," they mean a sauce combining all the basic tastes. A chef may mix chicken broth (umami), sea salt (salt), a touch of vinegar (sour), papaya (sweet) and tarragon (bitter) to create a perfectly balanced papaya hollandaise sauce to pair with Hawaiian red snapper. Great flavor includes each of the basic tastes, and the tongue was designed to taste balanced flavor.

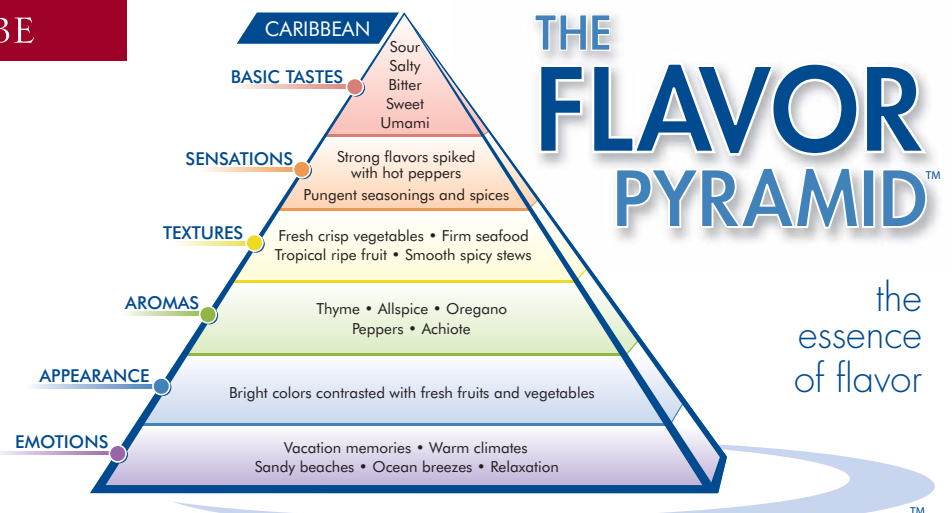


MUSHROOM COUNCIL

Mushrooms up the umami quotient in many cuisines.

## THE FLAVOR PYRAMID AROUND THE GLOBE

The Caribbean Flavor Pyramid shows how ingredients like chiles and thyme build on such elements as a warm climate and the ocean's bounty to create the characteristic flavors of a region.



## THE PYRAMID AT WORK

Certainly, the accomplished chef understands how to create great flavor, but not every chef has the tools to convey those flavors to the server who is attempting to describe a dish to the customer. The customer most often gets lost in the flavor translation.

We train our kitchen staff about food safety, cooking techniques, recipe familiarity, ingredients, etc. We make sure our front-of-the-house staff is well practiced in setting tables, seating guests, knowing the menu, pouring wine and refilling water glasses. But flavor, the very essence of our business, rarely gets

much training attention. How do we convey the subtle hints of peppery greens that enhance the salad mix or the champagne vinegar and sage honey that balance the vinaigrette?

The Flavor Pyramid is designed to give all of us a vocabulary for discussing the often-intangible qualities of flavor. By using this pyramid, every food experience can be evaluated through a defined set of attributes comprising of six building blocks to arrive at a common language. The Flavor Pyramid can provide a flavor training system that brings to the forefront what your customers need to know — the great tastes that set your concept apart. The same system can be used to develop the language to market flavor to potential customers.

The Flavor Pyramid can also be used as a tool for product and menu evaluation. By establishing a set of guidelines and attributes for evaluating flavor throughout the research and development process, The Flavor Pyramid can be used as a benchmark for keeping concepts on target with customers. Has the soup become too salty? Are the vegetables roasted to the proper level of caramelization? The pyramid creates a success model to keep strategies, tactics and products on the right critical path.

The goal of The Flavor Pyramid is to simplify the complex task of developing and understanding flavor, and to create a tool that takes both the scientific and artistic elements of flavor development into account. By using The Flavor Pyramid as a foundation for understanding flavor experiences, you will be able to deconstruct eating behavior and gain a better understanding, layer by layer, of both flavors and cuisines. ☺

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### TAKE-AWAY TIPS

- ▶ **BUILD YOUR OWN:** Keep every level of the pyramid in mind as you approach your next dish
- ▶ **VISIT THE PYRAMIDS:** Go to [www.flavorpyramid.com](http://www.flavorpyramid.com) for more information

## FUTURE FLAVOR PYRAMID DISCUSSIONS

Now that we've introduced the concept of The Flavor Pyramid, future issues will discuss how it can increase our understanding of other factors that influence flavor, including:

**The Science of Taste:** How do taste, smell and chemosensory irritations combine to influence our flavor preferences?

**Flavor Related to Global Cuisines:** The Caribbean Flavor Pyramid on page 43 provides a glimpse of how The Flavor Pyramid can be used to break down the cultural, geographical, environmental and economic factors that influence a region's flavors.

**Flavor in Menu Research and Development:** Ways to use The Flavor Pyramid to keep flavors in line with menu branding and concept development.

**Understanding Consumers:** Why the sushi surge? How do donuts trump the Atkins craze? Why is meatloaf so comforting? The Flavor Pyramid will help us understand the emotional perceptions, cultural responses and sensory attributes that create flavor preferences and trends.

**Flavor, Nutrition and Healthful Eating:** Flavor is often the missing element in diets and in more healthful menu offerings. The Flavor Pyramid will provide the tools to keep flavor in focus when developing more healthful eating options.

The ultimate goal of The Flavor Pyramid is to provide a single resource system to increase professionals' and consumers' understanding of every aspect of flavor, including how to develop complex and satisfying flavors and how to encourage flavor exploration and new taste experiences.

For more information, please visit [www.flavorpyramid.com](http://www.flavorpyramid.com), e-mail [skaun@flavorsolutions.org](mailto:skaun@flavorsolutions.org), or call Flavor Solutions at 951-302-7064.