Unit 5A&B

Practical lessons:

The Mise en place:

Chapter 7: The practical experiments start here

Mise en place:

- We have talked about this word many times.
- It is essential if we are to make the most of our practical experiments
- The idea is that we are prepared for Basic Food Production
- By preparing in advance and being organized, we are preparing our for a professional approach

Teams and teamwork:

- As we saw with Escoffier's brigade, the kitchen works as part of a team
- This means that we are split into teams. Each team has a 'STATION'. The team is responsible for that station.
  - With a leader chosen for each team.
    - The leader is responsible for organizing the team and giving tasks.
    - The leader is also responsible for making sure that the station is clean before leaving.
- **<u>Teamwork is very important in the workplace</u>**
  - 'Many hands make light work'. Learning how to divide tasks is essential for you as employees and managers.

Teams:

Basic Food Production: Practical

Session 1

200950003	JiaYou	YoYo	尤稼	09HAT	Group 1
200950004	XiaoyueQi	Mickey	亓晓悦	09HAT	
200850012	WeiZhang	Peter	张维	09HAT	
200950028	YuTang	Zoe	唐妤	09HAT	
200950006	LuqinChen	Peggy	陈露琴	09HAT	Group 2
200950007	MengyingGuo	Candy	郭梦莹	09HAT	
200950012	JieHe	Jessie	何婕	09HAT	
200950035	XiwenXin	Mike	辛喜文	09HAT	
200950010	YimengSui	Monica	眭轶梦	09HAT	Group 3
200950017	LiweiHao	Lisa	郝力玮	09HAT	
200950020	XinrongLi	Lecho	李欣容	09HAT	
200950022	YuanyuanGao	Crycea	郜源源	09HAT	
200950013	GuoqinSun	NoNo	孙国琴	09HAT	Group 4
200950015	YanyeXu	JoJo	徐焱烨	09HAT	
200950023	JingyiYuan	Judy	袁静一	09HAT	
200934136	YueZhu	Celine	朱玥	09HAT	

Session 2

200950031	ZhangtaoGu	Alex Gu	顾章涛	09HAT	Group 5
200950029	GuozhiKong	Tom	孔国治	09HAT	
200950025	JunqiangChen	Pixy	陈俊强	09HAT	
200950021	RunsuZhang	Ben	章润甦	09HAT	
200850037	CunJiang	Alex Jiang	江村	09HAT	Group 6
200950019	SushengWu	Simon	吴苏晟	09HAT	
200950016	TingzhenShi	Terell	史庭臻	09HAT	
200850028		Dante		09HAT	
200950038	Yu MingNg	Carson	吴予鸣	09HAT	Group 7
200950032	JianghongWu	Jack	吴江洪	09HAT	
200950018	YantingMu	Hero	慕颜廷	09HAT	
200950001	MulanDuan	Cheer	端木兰	09HAT	Group 8
200950026	QiaolingShen	Keren	沈巧玲	09HAT	
200950034	ZhipingHu	Marilyn	胡志平	09HAT	
200950036	LijuanHuang	CoCo	黄丽娟	09HAT	
200950008	MujunWu	Andy	吴慕骏	09HAT	Group 9
200950009	JunjieHua	Ryan	华骏桀	09HAT	
200950030	ZelinRen	Percy	任泽林	09HAT	

Mise en place: in the kitchen

- **What does it mean to you?**
- Make sure that you come to class on time. We have a limited time for the practical class so don't waste it
- Bring all your kitchen material: apron, containers and towel (plus anything else you want to bring)
- Make sure they are ready to use for each class (clean, sharp etc.)
- Take pride in your personal presentation. This means personal hygiene as we have talked about in previous classes. I especially want the anyone with long hair to tie it up.
  - I will NOT allow you make food if you don't.
  - You will also lose marks if you do not follow the sanitation and hygiene guidelines that we have talked about so many times.

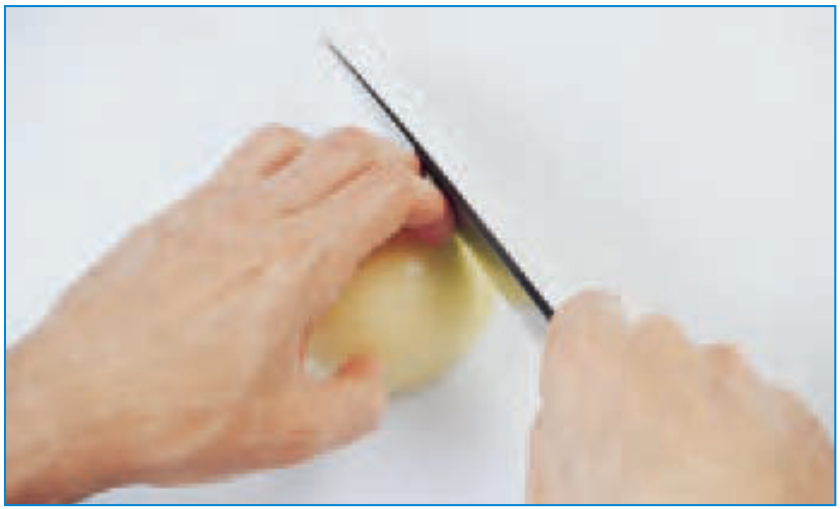
In the beginning:

- The first we need to learn is how to prepare our ingredients
- This may require cleaning them
- Different ingredients require different cleaning methods
- Removing dirt is essential. We don’t want to eat the dirt!
- It is especially important to wash cold food items.
- We may then need to peel the ingredient
- We may to cut out the root (the part that was in the ground)
- We may also need to trim some part of it to get to what we want

Using a knife: page 129

- It is a skill that requires practice. Maybe you can practice at home
- Be careful. Use both hands when using a knife:
- **The Guiding Hand**
- While one hand controls the knife, the other hand controls the product being cut.
- Proper positioning of the hand achieves three goals:
- **1. Hold the item being cut.**
  - Like in the picture the item is held firmly so it will not slip.
- **2. Guide the knife.**
  - Note that the knife blade slides against the fingers.
  - The position of the hand controls the cut.
- **3. Protect the hand from cuts.**
  - Fingertips are curled under, out of the way of the blade.

Tourné: 2 in. long × $^{3}/_{4}$ in. diameter, with 7 sides, and flat-ended.	**Rondelle:** round or bias-round cuts, varied diameter or thickness.
Large dice: $^{3}/_{4}$ in. × $^{3}/_{4}$ in.× $^{3}/_{4}$ in. (2 cm × 2 cm × 2 cm).	**Paysanne:** $^{1}/_{2}$ in. × $^{1}/_{2}$ in. × $^{1}/_{8}$ in. (round, square, or rectangular).
Medium dice: $^{1}/_{2}$ in. × $^{1}/_{2}$ in. × $^{1}/_{2}$ in. (12 mm × 12 mm × 12 mm).	**Batonnet:** $^{1}/_{4}$ in. × $^{1}/_{4}$ in. × $2^{1}/_{2}$–3 in. (6 mm × 6 mm × 6–7.5 mm).
Small dice: $^{1}/_{4}$ in. × $^{1}/_{4}$ in. × $^{1}/_{4}$ in. (6 mm × 6 mm × 6 mm).	**Julienne:** $^{1}/_{8}$ in. × $^{1}/_{8}$ in. × $2^{1}/_{2}$ in. (3 mm × 3 mm × 6 mm).
Brunoise: $^{1}/_{8}$ in. × $^{1}/_{8}$ in. × $^{1}/_{8}$ in. (3 mm × 3 mm × 3 mm).	**Fine julienne:** 2 in. long × $^{1}/_{16}$ in. × $^{1}/_{16}$ in.
Fine brunoise: $^{1}/_{16}$ in. × $^{1}/_{16}$ in. × $^{1}/_{16}$ in.	



Different parts of the blade are appropriate for different purposes

The tip of the knife, where the blade is thinnest and narrowest, is used for delicate work and small items

The center of the blade is used for most general work.

The heel of the knife is used for heavy or coarse work, especially when greater force is required.

Slicing: page 135

The tip should always be in contact with the board

Slicing 2: page 135

Start the blade at a 45-degree angle, with the tip on the cucumber against the fingers of the guiding hand.

Slice downward and forward through the item.

Dicing an Onion: page 137

Dicing an onion presents a special problem for cutting because its form is in layers, not a solid piece.

Chopping herbs:

Chopping with a French knife. Holding the tip of the knife against the cutting board, rock the knife rapidly up and down. At the same time, gradually move the knife sideways across the product on the board so the cuts pass through all parts of the pile of food. After several cuts, redistribute the pile and begin again. Continue until the product is chopped as fine as you want.

Building flavour

Building flavour

- People eat because they enjoy the flavours of good food, **not just because** they must fill their stomachs to stay alive.
- **Appearance, texture, and nutrition are important**.

- The harmony of ingredient flavours and aromas the cook creates by combining ingredients skilfully is sometimes called a **flavour profile.**

BUILDING FLAVOR PROFILES

- Appearance (colour and colour contrast, shape, shine, arrangement on the plate)
- Aroma
- Taste
- Mouth feel (texture, moistness or dryness, softness or crispness) and temperature

Seasoning vs flavouring:

- **Seasoning**: Enhancing the natural flavour of food without significantly changing its flavour. Salt is the most important seasoning.
  - Pepper and Red pepper are the other main seasonings
  - Lemon juice can also be classed as a seasoning.

- **Flavouring**: Adding a new flavour to food, changing or modifying the original flavour.
  - Herbs and Spices
  - Alcohol beverages such a Wine, Liqueurs, Sherry – Flambé
  - Vinegars & Flavoured Oils
  - Onions, garlic, leeks etc.

When to season/flavour:

- The most important time to season is at the END of the cooking process

- Flavouring can be done at ay time during cooking, but only a few flavourings can be added successfully at the end of cooking

Converting recipes and yield: page101

Unit 5B

Portion control

- **Portion control** is the measurement of portions to ensure that the correct amount of an item is served
- **Portion control** actually begins with the measuring of ingredients
- **Portion Control in Plating and Service:**
  - **Count :** Examples: 1 slice of ham per order; 5 shrimp per order
  - **Weight:** Example:4 ounces of sliced ham per order
  - **Volume:** Ladles, scoops, and kitchen spoons come in standard sizes and are used for portioning
  - **Even division:** Examples: cutting a pie into 8 equal wedges
  - **Standard fill:** Standard-size dishes, cups, or glasses are filled to a given level, as judged by eye

Procedure for Converting Total Yield

- Desired yield / Recipe yield =
- Conversion factor x Each ingredient quantity

Procedure for Converting Total Yield:

Example : *You have a recipe for 10 portions* of Broccoli Mornay requiring 1,500 grams of broccoli and 600 ml Mornay Sauce.

- ***Convert to 15 portions***
- **New yield = 15 = 1.5**
- **Old yield = 10**
- **Broccoli: 1500g × 1.5 = 2250g**
- **Sauce: 600 ml × 1.5 = 900 ml**

- ***Convert to 5 portions***
- **New yield = 5 = 0.5**
- **Old yield = 10**
- **Broccoli: 1500g x 0.5= 750g**
- **Sauce: 600ml x 0.5=300ml**

Procedure for changing portion sizes

1. Determine total yield of the recipe by multiplying the number of portions by the portion size:

   portions × portion size = total yield (old)

2. Determine the total yield you desire by multiplying the desired number of portions by the desired portion size:

   desired portions × desired portion size = total yield (new)

3. Divide desired yield by recipe yield to get the conversion factor:

$$\frac{\textbf{total yield (new)}}{\textbf{total yield (old)}} = \textbf{conversion factor}$$

4. Multiply each ingredient by the conversion factor:

   conversion factor × old quantity = new quantity

Procedure for changing portion sizes

- *Beef tenderloin tips and mushrooms à la crème*
- *Portions:8*
- *Portion size: 8 oz*
- Butter 2 oz
- Onions 4 oz
- Flour 1 tbsp
- Mushrooms ½ **lb**
- Beef tenderloin 2½ **lb**
- White wine ½ **cup**
- Prepared mustard 2 tsp
- Brown sauce 1½ **pt**
- Heavy cream 1 cup
- Salt to taste
- Pepper to taste
- **Let's say we need 18 portions instead of 8. To find the conversion factor, we divide the new yield by the old yield:**

$$\frac{\text{new yield}}{\text{old yield}} = \frac{18}{8} = 2.25$$

- **To convert the recipe to 18 portions, we simply multiply each ingredient quantity by this conversion factor of *2.25.***

Solution: 18 or 30

Example 1

Ingredient	Quantity	Times	Conversion Factor	Equals	New Quantity
Butter	2 oz	x	2.25	=	4.5 oz
Onions	4 oz	x	2.25	=	9 oz
Flour	1 tbsp	x	2.25	=	2.25 tbsp *or* 2 tbsp plus ¾ tsp
Mushrooms	8 oz	x	2.25	=	18 oz *or* 1 lb 2 oz
Beef tenderloin	40 oz	x	2.25	=	90 oz *or* 5 lb 10 oz
White wine	4 fl oz	x	2.25	=	9 fl. oz
Prepared mustard	2 tsp	x	2.25	=	4½ tsp *or* 1½ tbsp
Brown sauce	24 fl oz	x	2.25	=	54 fl oz *or* 3 pt plus 6 fl oz
Heavy cream	8 fl oz	x	2.25	=	18 fl oz *or* 2¼ cups

Example 2

Ingredient	Quantity	Times	Conversion Factor	Equals	New Quantity
Butter	2 oz	x	3.75	=	7.5 oz
Onions	4 oz	x	3.75	=	15 oz
Flour	1 tbsp	x	3.75	=	3.75 tbsp *or* 3 tbsp plus 2¼ tsp
Mushrooms	8 oz	x	3.75	=	30 oz *or* 1 lb 14 oz
Beef tenderloin	40 oz	x	3.75	=	150 oz *or* 9 lb 6 oz
White wine	4 fl oz	x	3.75	=	15 fl. oz
Prepared mustard	2 tsp	x	3.75	=	7½ tsp *or* 2½ tbsp
Brown sauce	24 fl oz	x	3.75	=	90 fl oz *or* 5 pt plus 10 fl oz
Heavy cream	8 fl oz	x	3.75	=	30 fl oz *or* 3¾ cups

Exercise:

- Turn to the recipe for Swedish Meatballs on page 339.
- Convert it to yield 35 portions.

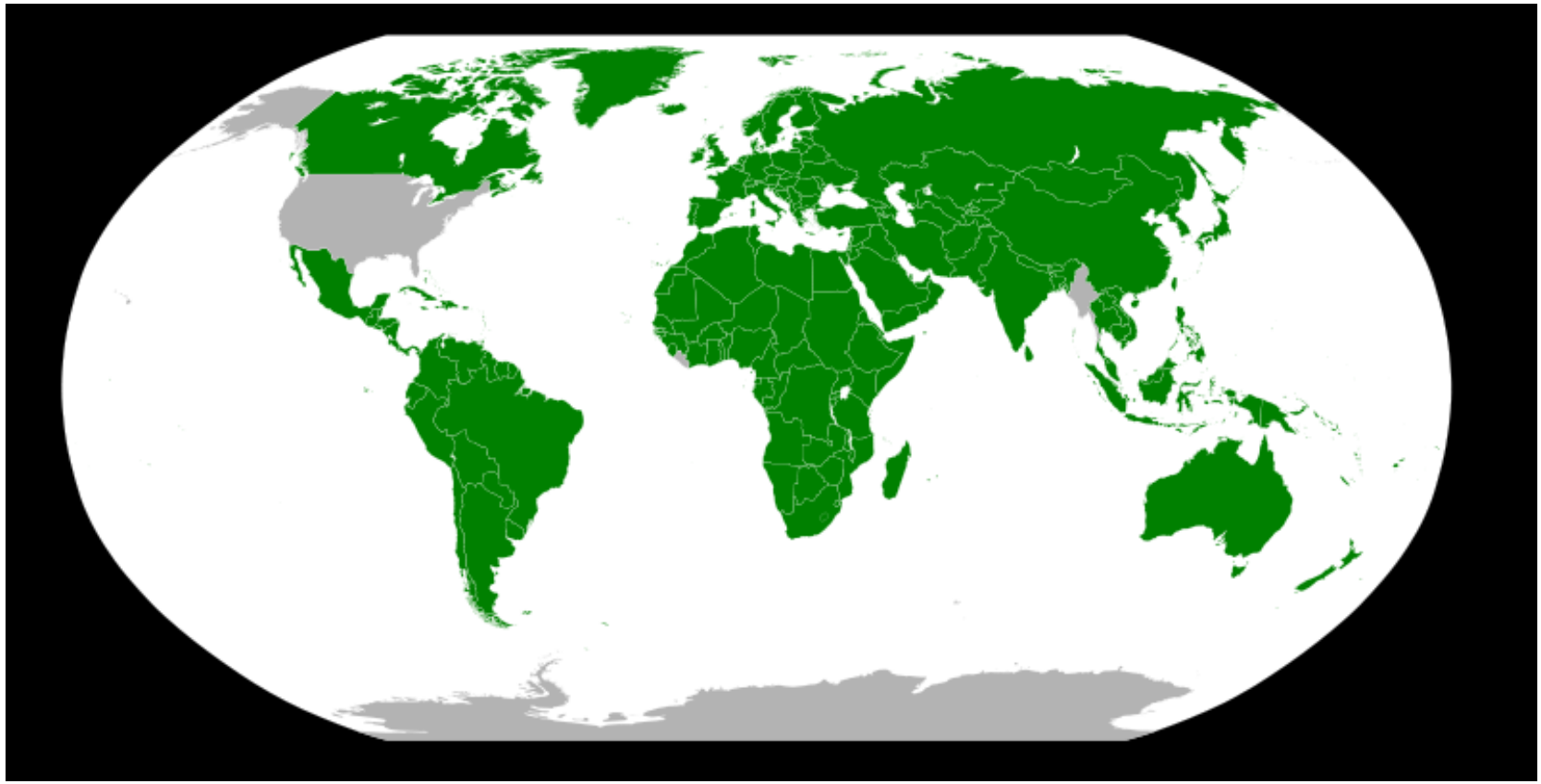
Metric system:

Metric system:

- In the metric system, there is one basic unit for each type of measurement:
- The **gram is the basic unit of weight.**
- The **liter is the basic unit of volume.**
- The **meter is the basic unit of length.**
- The **degree Celsius is the basic unit of temperature.**

Table 5.4
Metric Units

Basic Units		
Quantity	**Unit**	**Abbreviation**
weight	gram	g
volume	liter	L
length	meter	m
temperature	degree Celsius	°C
Divisions and Multiples		
Prefix/Example	**Meaning**	**Abbreviation**
kilo-	1,000	k
kilogram	1,000 grams	kg
deci-	$\frac{1}{10}$	d
deciliter	0.1 liter	dL
centi-	$\frac{1}{100}$	c
centimeter	0.01 meter	cm
milli-	$\frac{1}{1,000}$	m
millimeter	0.001 meter	mm



Countries which have officially adopted the metric system

Countries which have not officially adopted the metric system (US, Myanmar, Liberia)

Make the following conversions in the metric system:

- 1.4 kilograms = _____ grams
- 53 deciliters = _____ liters
- 15 centimeters = _____ millimeters
- 2,590 grams = _____ kilograms
- 4.6 liters = _____ deciliters
- 220 centiliters = _____ deciliters

- 100ml = 10cl = 1dl

Nutrition: Page 117

Nutrition:

- Nutrition plays a big part of food production.
- Chefs and Managers need to know about nutrition when planning a menu.
- Nowadays, people are aware of this information and make judgements about their restaurant based on this.

- *For your homework, read page 117 and answer this question*

- What is **nutrition** and **why is it important**? Minimum 250 words. Please give it to me on Monday.

Nutrition:

- Menu planners must have a basic understanding of nutrition because the human body requires a variety of foods in order to function and be healthy.
- The food service worker's responsibility to provide nutritious food and well-balanced menus depends, in part, on the operation.
- School and hospital food services must, of course, plan menus carefully to meet basic nutritional needs.
- A qualified dietitian is usually required in such establishments.

Table 6.1
Major Nutrients

Nutrient	Major Dietary Sources		Functions in the Body
Carbohydrates	Grains (including breads and pasta) Dried beans	Potatoes Corn Sugar	Major source of energy (calories) for all body functions. Necessary for proper utilization of fats. Unrefined carbohydrates supply fiber, important for proper waste elimination.
Fats	Meats, poultry, and fish Dairy products Eggs	Cooking fats and shortening Salad dressings	Supply food energy (calories). Supply essential fatty acids. Carry fat-soluble vitamins.
Proteins	Meats, poultry, and fish Milk and cheese Eggs	Dried beans and peas Nuts	Major building material of all body tissues. Supply energy (calories). Help make up enzymes and hormones, which regulate body functions.
Vitamin A	Liver Butter and cream Egg yolks	Green and yellow vegetables and fruits	Helps skin and mucous membranes resist infection. Promotes healthy eyes and makes night vision possible.
Thiamin (Vitamin B_1)	Pork Whole grains and fortified grains	Nuts Legumes Green vegetables	Needed for utilization of carbohydrates for energy. Promotes normal appetite and healthy nervous system. Prevents beriberi.
Riboflavin (Vitamin B_2)	Organ meats Milk products	Whole grains and fortified grains	Needed for utilization of carbohydrates and other nutrients. Promotes healthy skin and eyes.

Niacin (a B vitamin)	Liver Meat, poultry, and fish	Legumes	Needed for utilization of energy foods. Promotes healthy nervous system, skin, and digestion. Prevents pellagra.
Vitamin B_{12}	Most animal and dairy products		Promotes healthy blood and nervous system.
Vitamin C (ascorbic acid)	Citrus fruits Tomatoes Potatoes Dark green leafy vegetables	Peppers, cabbage, and broccoli Cantaloupe Berries	Strengthens body tissues. Promotes healing and resistance to infection. Prevents scurvy.
Vitamin D	Fortified milk products	Formed in skin when exposed to sunlight	Necessary for utilization of calcium and phosphorus to promote healthy bones, teeth, and muscle tissue.
Vitamin E	Unsaturated fats (vegetable oils, nuts, whole grains, etc.)		Protects other nutrients.
Calcium	Milk products Leafy vegetables	Canned fish with bones	Forms bones and teeth. Necessary for healthy muscles and nerves.
Iron	Liver and red meat Raisins and prunes Egg yolks	Leafy vegetables Dried beans Whole grains	Needed for formation of red blood cells.

Nutrients:

- Nutrients are certain chemical compounds that are present in foods and that fulfill one or more of the following functions:

1. Supply energy for body functions.
2. Build and replace cells that make up body tissues.
3. Regulate body processes.

There are six categories of nutrients:

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

Calories:

- The calorie is a unit of measurement of energy. It is defined as the amount of heat needed to raise the temperature of 1 kilogram of water by 1°C

- Remember that one of the functions of nutrients is to supply energy to the body

- The calorie is used to measure how much energy certain foods supply for these functions.
- There is a direct connection between calorie intake, physical activity, and weight gain.
- Simply, if you consume more calories than you burn, you gain weight. If you consume fewer calories than you burn, you lose weight.

Carbohydrates:

- Carbohydrates are compounds consisting of carbon, hydrogen, and oxygen atoms bound together in chains of varying lengths.

- Sugars are simple carbohydrates. Simple sugars, such as glucose, are small compounds containing 6 carbon atoms.

- Carbohydrates are the body's most important source of food energy.
- Fats and proteins can also be burned for energy, but the body uses carbohydrates first. If no carbohydrates are available, the body then burns fat

Fats:

- Fats supply energy to the body in highly concentrated form. Also, some fatty acids are necessary for regulating certain body functions.
- Fats act as carriers of fat-soluble vitamins (vitamins A,D, E, and K). Because of these important functions, it is necessary to have some fats in the diet.
- Fats may be classified as **saturated, monounsaturated, or polyunsaturated.**
- Saturated fats are solid at room temperature. Animal products—meats, poultry, fish, eggs, dairy products—and solid shortenings are the major source of saturated fats
- Polyunsaturated fats and monounsaturated fats are liquid at room temperature.

Proteins:

- Proteins are known as the building blocks of the body.
- They are essential for growth, for building body tissues, and for basic body functions.
- They can also be used for energy if the diet does not contain enough carbohydrates and fats.
- Proteins consist of substances called *amino acids. The body is able to manufacture* many of them, but there are nine amino acids it cannot manufacture and must get from
- foods.
- A food protein that contains all nine essential amino acids is called a **complete protein.**
- **Meats, poultry, fish, eggs, and dairy products contain complete proteins.**

Vitamins:

- **Vitamins are present in foods in extremely small quantities, but they are essential for regulating body functions.**

- Unlike proteins, fats, and carbohydrates, they supply no energy, but some of them must be present in order for energy to be utilized in the body.

- Also, lack of certain vitamins causes *deficiency diseases.*
- Vitamins are classified as water soluble and fat soluble.
- The water-soluble vitamins (the B vitamins and vitamin C) are not stored in the body and must be eaten every day.
- Foods containing these vitamins should be handled so the vitamins are not dissolved into the cooking water and lost

- Fat-soluble vitamins (A,D, E, and K) can be stored in the body, so they do not need to be eaten every day as long as the total amount eaten over time is sufficient

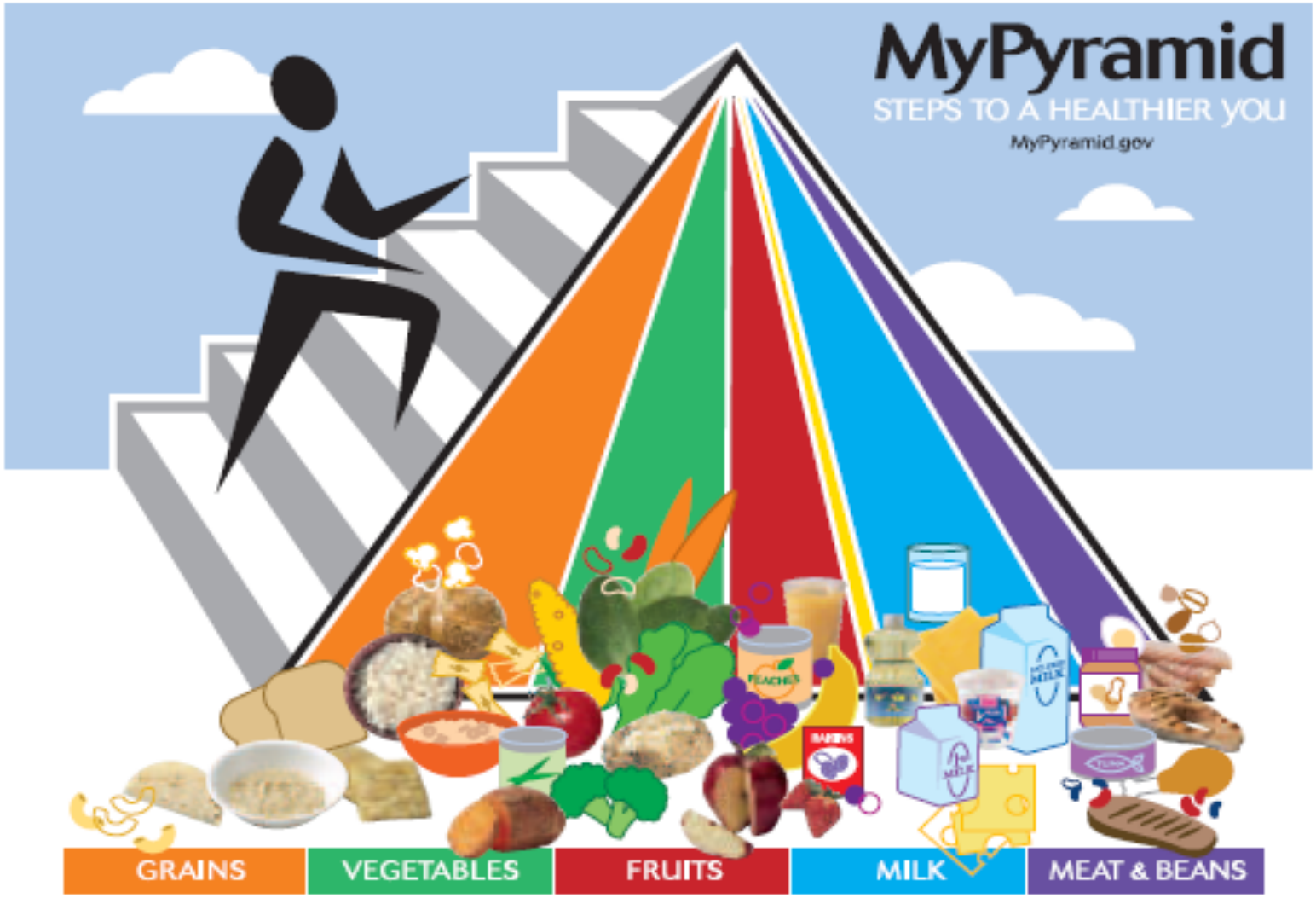
Minerals

- Minerals, like vitamins, are consumed in very small quantities and are essential for regulating certain body processes.
- Minerals that must be consumed in relatively large amounts—more than 100 milligrams daily—are called ***major minerals***.
  - These include calcium, chloride, magnesium, phosphorus, sulfur, sodium, and potassium.
- Minerals that must be present in smaller amounts are called ***trace minerals.***
  - These include chromium, copper, fluoride, iodine, iron, manganese, molybdenum, selenium, and zinc.

Water:

- The adult human body is 50 to 60 percent water by weight.
- Water plays a role in all the body's functions, including metabolism and other cell functions, digestion, delivery of nutrients, removal of waste, temperature regulation, and lubrication and cushioning of joints and tissues.
- Water forms a large part of most of the food we eat and all the beverages we drink.
- The body is good at regulating its own water content and tells us when we need more by making us feel thirsty.
- This signal should not be ignored. Even better is to drink enough fluids to *prevent feeling thirsty*

The traditional healthy Asian diet pyramid


MyPyramid
STEPS TO A HEALTHIER YOU
MyPyramid.gov
GRAINS
VEGETABLES
FRUITS
MILK
MEAT & BEANS

The traditional healthy Mediterranean diet pyramid.


Daily Beverage Recommendations:
6 Glasses of Water
Alcohol in moderation
MEAT SWEETS & EGGS
WEEKLY
PLANT OILS
FISH
DAIRY
& SHELLFISH
POULTRY
DAILY
WHOLE GRAINS, TUBERS, BEANS & NUTS
AT EVERY MEAL
FRUITS
VEGETABLES
Daily Physical Activity
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Tell me about your nutrition:

- Assess your nutrition intake for 3 days for me.
- This may involve finding information about what is in your food