Krishnasamy College of Science, Arts and Management for Women, Cuddalore – 607109

Department of Chemistry

Bridge Course time table 2021 – 2022

(27.09.2021 – 01.10.2021)

S.No	I (10.00 am – 10.45 am)	II (11.00am - 11.45 am)
1	About the College **(Dr.R.Hemalatha)** https://meet.google.com/yyo-efoi-mav	General English **(Mrs.S.Sushma)** https://meet.google.com/hgt-kzbm-xbe
2	About Course, syllabus , internal Assessments, Exam pattern **(Ms.R.Poonguzhali)** https://meet.google.com/nyi-ohtu-dpv	General Tamil (Ms.Mathiyarasi) https://meet.google.com/wtt-xddn-mkt
3	General health hygiene/Menstrual Hygiene **(Dr.C.M.Mahalakshmi)** https://meet.google.com/amx-eaqg-eao	General English **(Mrs.S.Sushma)** https://meet.google.com/hgt-kzbm-xbe
4	General Tamil (Mrs.Poovizhi) https://meet.google.com/kgg-qxmy-srd	About Sports **(Ms.Sivabrinda) https://us05web.zoom.us/j/9776302489?pwd=T3hxeTA2UzduQ1p2UUozSmJQWWtCZz09**
5	Chemistry in Everyday life **(Dr.R.Hemalatha)** https://meet.google.com/yyo-efoi-mav	Opportunities and placements of chemistry students **(Dr.C.M.Mahalakshmi)** https://meet.google.com/amx-eaqg-eao

Importance of Chemistry in Everyday Life

Read More:

- Antibiotics Classification
- Milk of Magnesia
- Slaked Lime
- Analgesics Types

Chemicals of Food in Everyday Life

The following chemicals are widely used in food materials.

1. Colouring agents
2. Artificial preservatives
3. Flow stabilisers
4. Binding substance
5. Artificial sweetness
6. Antioxidants
7. Minerals
8. Vitamins

These substances do not have nutritional value except vitamins. Also Read:

Important Questions on Chemistry in Everyday Life

Artificial Preservatives: They prevent spoilage of food by stopping the growth ofmicroorganisms. For example, sodium benzoate and sodium meta bisulphate.

Artificial Sweetness: They do not impart any calories to the body since thesesubstances are excreted through urine. For example,

1. **Aspartame:** It is used in cool drinks and ice creams.
2. **Alitame:** It is 2000 times sweeter than sucrose.

Antioxidants: They prevent the spoilage of food by preventing the oxidation of food.For example,

1. Butylated hydroxyl tolerance (BHT)
2. Butylated hydroxyl anisole (BHA)

Dyes are coloured organic compounds that are used to impart colour to varioussubstrates, including paper, leather, fur, hair, drugs and cosmetics. Dyes are classified into **natural dyes and synthetic dyes.**

Chemistry of Cleansing Agents in Everyday Life

What are soap and detergents?

Soaps are sodium or potassium salt of higher carboxylic acid such as stearic acid,palmitic acid and oleic acid, whereas detergents contain a long chain of alkyl groups. Detergents, in comparison to soaps, can also function in hard water.

Saponification: Alkaline hydrolysis of triesters of glycerol to form soap is known assaponification. Soap does not function in hard water since they precipitate in it.

How do soaps work?

Soaps are generally sodium or potassium salts of long-chain fatty acids. Soap molecules have a hydrophobic as well as a hydrophilic part. While the hydrophilic part clings to the water when washing, the hydrophobic end clings to the dirt particles. Thus, when we pour away the water, the dirt particles wash away withthe soap molecules.

Also Read: Cleansing Action of Soaps and Detergents

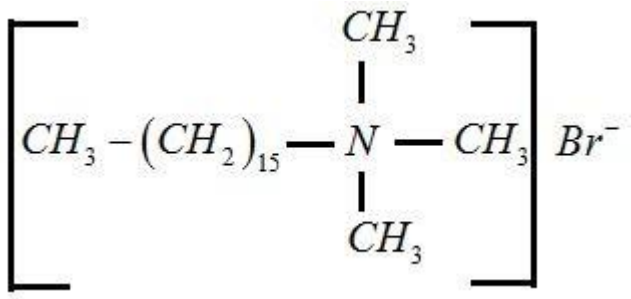
Types of Soaps

1. **Toilet Soaps:** Potassium soaps are softer than sodium soaps.
2. **Floating Soaps:** They can be prepared by beating soap bubbles.
3. **Transparent Soaps:** They contain soap dissolved in excess of alcohol, and it is evaporated.
4. **Medicated Soaps:** They contain soaps by adding little amounts of Dettol, Savlon, etc.
5. **Laundry Soaps:** They mainly contain sodium rosinate and borax.

Types of Detergents

Anionic Detergent: In this type, anions act as detergents. For example, sodiumlauryl sulphate

Cationic Detergent: In this type, cations act as detergents. For example, cetyltrimethyl ammonium bromide.



Non-ionic Detergent: They are neutral. The whole molecule acts as a detergent. Forexample, polyethylene glycol stearate.

Chemistry of Cosmetics in Everyday Life

Cosmetics contain the following categories of chemicals:

- **Emulsifiers:** They increase the stability of the emulsion. For example, potassium cetylsulfate.
- **Preservatives:** They are added to cosmetics to increase their shelf life. For example,benzyl alcohol and salicylic acid.
- **Thickeners:** They give an appealing consistency. For example, cetyl alcohol and stearicacid.
- **Emollients:** They soften the skin by preventing water loss. For example, glycerineand zinc oxide.
- **Glimmer and Shiners:** For example, mica, bismuth oxychloride.

Other Examples of Chemistry in Everyday Life

Let us now discuss some common examples of chemistry in everyday life whichmost of us never knew about.

The Expiration Date on Bottled Drinking Water

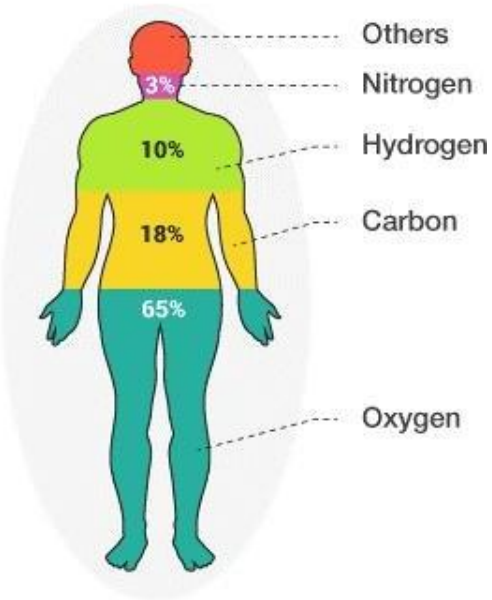
Have you ever wondered why there is an expiration date on a bottle of drinking water? After all, it is just water, isn't it? Well, most of us haven't even noticed that there is, in fact, an expiration date on the bottle. The idea behind instilling anexpiration on bottled drinking water is to standardise its packaging quality.

What the actual expiration date signifies is if the expiration date is up, the taste of the water will be different as there is a chance that the chemicals in the packaging material may ruin the quality of the water.

Elements in the Human Body

We all know that our body is about 60% water, but then what composes the restof it? Carbon, Hydrogen, Nitrogen and Oxygen. These elements compose 96% of the human body. Whereas the rest 4% is composed of about 60 elements. Some ofthese elements include calcium, phosphorus, potassium and sulphur

Element	Symbol	Percentage in Body
Oxygen	O	65.0
Carbon	C	18.5
Hydrogen	H	9.5
Nitrogen	N	3.2
Calcium	Ca	1.5
Phosphorus	P	1.0
Pottassium	K	0.4
Sulfur	S	0.3
Sodium	Na	0.2
Chlorine	Cl	0.2
Magnessium	Mg	0.1
Trace elements include boron, chromium, cobalt, copper, fluorine, iodine, iron, manganese, molybdenum, selenium, silicon, tin, vanadium, and zinc.		>1.0



Sunblock and Sunscreen

There are two kinds of rays from the sun which are particularly bad for us, UV-Aand UV-B. A sunscreen's action, as the name suggests, functions as a screen and offers protection from sunburn which is caused by UV-B. Whereas, a sunblock hasmore of reflective nature and blocks both UV-A and UV-B radiations.

Menstruation (also called a "period") is a normal biological process experienced by millions around the world each month. A period happens when the uterus sheds blood and tissue fromthe uterine lining and leaves your body through the vagina.

Practice Healthy Habits During Your Period

Good menstrual health and hygiene practices can prevent infections, reduce odors, and helpyou stay comfortable during your period.

You can choose many types of menstrual products to absorb or collect blood during yourperiod, including sanitary pads, tampons, menstrual cups, menstrual discs, and period underwear. Follow these tips when you are using menstrual products, in addition to instructionsthat come with the product:

- Wash your hands before and after using the restroom and before using a menstrualproduct.
- Discard used disposable menstrual products properly: wrap them with toilet paper, atissue, or other material and then toss in a trash bin. Do not flush menstrual products down the toilet.
- Sanitary pads: Change sanitary pads every few hours, no matter how light the flow. Change them more frequently if your period is heavy.
- Tampons: Change tampons every 4 to 8 hours. Do not wear a single tampon for morethan 8 hours at a time.
    - Use the lowest-absorbency tampon needed. If you can wear one tampon for upto 8 hours without changing, the absorbency may be too high.
- Menstrual cups: Clean cups every day after use. Sanitize menstrual cups after your period is over by rinsing them thoroughly and then placing them in boiling water for oneto two minutes.
- Period underwear: Most reusable period underwear is machine washable. Follow product directions on the best way to clean.

Menstrual Hygiene Is Key in Promoting Good Health

These hygiene practices can help you stay healthy and comfortable during your period:

- **Wear lightweight, breathable clothing** (such as cotton underwear). Tight fabrics cantrap moisture and heat, allowing germs to thrive.
- **Change your menstrual products regularly.** Trapped moisture provides a breeding ground for bacteria and fungi. Wearing a pad or period underwear for too long can leadto a rash or an infection.
- **Keep your genital area clean.** Wash the outside of your vagina (vulva) and bottom every day. When you go to the bathroom, wipe from the front of your body toward the back, not the other way. Use only water to rinse your vulva. The vagina is a self-cleaning organ. Changing the natural pH balance of your vagina by washing or using chemicals tocleanse out the vagina can be harmful and may result in a yeast infection or bacterial vaginosis.
- **Use unscented toilet paper, tampons, or pads.** Scented hygiene products can irritatethe skin and impact your natural pH balance.
- **Drink enough liquids.** This can help wash out your urinary tract and help prevent infections, like vaginal candidiasis.
- **Track and monitor your period.** Your menstrual cycle is a valuable marker for your overall health. Irregular periods can be a sign of conditions like diabetes, thyroid dysfunction, and celiac disease. You can track your period on a calendar or with an appon your phone designed for this purpose.
- **Visit a healthcare provider for your annual check-up.** An annual well-woman exam isa full check-up that includes a pap smear, a pelvic exam, and a breast exam. These exams are essential for good reproductive health as they can catch early signs of cancer or otherhealth issues.

Talk to a doctor if you experience a change in odor, have extreme or unusual pain, or have moresevere period symptoms than usual (such as a heavier flow or longer period).

Menstrual Hygiene Day – May 28

Each year on May 28, Menstrual Hygiene Day is observed to highlight good menstrual hygiene practices during your period and to raise awareness about the importance of access to menstrual products, period education, and sanitation facilities.

A **Sport** is a form of physical activity or game.[1] Often competitive and organized, sports use,maintain, or improve physical ability and skills. They also provide enjoyment to participants and, in some cases, entertainment to spectators.[2] Many sports exist, with different participant numbers, some are done by a single person with others being done by hundreds.
Most sports take place either in teams or competing as individuals. Some sports allow a "tie"or "draw", in which there is no single winner; others provide tie-breaking methods to ensureone winner. A number of contests may be arranged in a tournament format, producing a champion. Many sports leagues make an annual champion by arranging games in aregular sports season, followed in some cases by playoffs.

Sport is generally recognised as system of activities based in physical athleticism orphysical dexterity, with major competitions admitting only sports meeting this definition.[3] Some organisations, such as the Council of Europe, preclude activities without anyphysical element from classification as sports.[2] However, a number of competitive, but non- physical, activities claim recognition as mind sports. The International Olympic

Committee who oversee the Olympic Games recognises both chess and bridge as sports. SportAccord, the international sports federation association, recognises five non- physical sports: bridge, chess, draughts, Go and xiangqi.[4][5] However, they limit the numberof mind games which can be admitted as sports.[1] Sport is usually governed by a set of rules or customs, which serve to ensure fair competition. Winning can be determined by physical events such as scoring goals or crossing a line first. It can also be determined by judgeswho are scoring elements of the sporting performance, including objective or subjective measures such as technical performance or artistic impression.

Records of performance are often kept, and for popular sports, this information may be widely announced or reported in sport news. Sport is also a major source of entertainment fornon-participants, with spectator sport drawing large crowds to sport venues, and reaching wider audiences through broadcasting. Sport betting is in some cases severely regulated, and insome cases is central to the sport.

According to A.T. Kearney, a consultancy, the global sporting industry is worth up to $620billion as of 2013.[6] The world's most accessible and practised sport is running, while association football is the most popular spectator sport.[7]

Meaning and usage

Etymology

The word "sport" comes from the Old French *desport* meaning "leisure", with the oldest definition in English from around 1300 being "anything humans find amusing or entertaining".[8]

Other meanings include gambling and events staged for the purpose of gambling; hunting; and games and diversions, including ones that require exercise.[9] Roget's defines the noun sport as an "activity engaged in for relaxation and amusement" with synonyms including diversion and recreation.[10]

Nomenclature

The singular term "sport" is used in most English dialects to describe the overall concept (e.g. "children taking part in sport"), with "sports" used to describe multiple activities (e.g. "football and rugby are the most popular sports in England"). American English uses "sports" for both terms.

Definition

> The International Olympic Committee recognises some board games as sports, including chess.an equestrian sport Show jumping

The precise definition of what differentiates a sport from other leisure activities varies between sources. The closest to an international agreement on a definition is provided by the Global Association of International Sports Federations (GAISF), which is the association for all the largest international sports federations (including association football, athletics, cycling, tennis, equestrian sports, and more), and is therefore the de facto representative of international sport.

GAISF uses the following criteria, determining that a sport should:[1]

- have an element of competition
- be in no way harmful to any living creature
- not rely on equipment provided by a single supplier (excluding proprietary games such as arena football)
- not rely on any "luck" element specifically designed into the sport.

They also recognise that sport can be primarily physical (such as rugby or athletics), primarily mind (such as chess or Go), predominantly motorised (such as Formula 1 or powerboating), primarily co-ordination (such as snooker and other cue sports), or primarily animal-supported (such as equestrian sport).[1]

The inclusion of mind sports within sport definitions has not been universally accepted, leadingto legal challenges from governing bodies in regards to being denied funding available to sports.[11] Whilst GAISF recognises a small number of mind sports, it is not open to admitting any further mind sports.

There has been an increase in the application of the term "sport" to a wider set of non- physical challenges such as video games, also called esports (from "electronic sports"), especiallydue to the large scale of participation and organised competition, but these are not widely recognised by mainstream sports organisations. According to Council of Europe, European Sports Charter, article 2.i, "'Sport' means all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well- being, forming social relationships or obtaining results in competition at all levels."[12]

Competition

Horse racing

There are opposing views on the necessity of competition as a defining element of a sport, withalmost all professional sports involving competition, and governing bodies requiring competition as a prerequisite of recognition by the International Olympic Committee (IOC) or GAISF.[1]

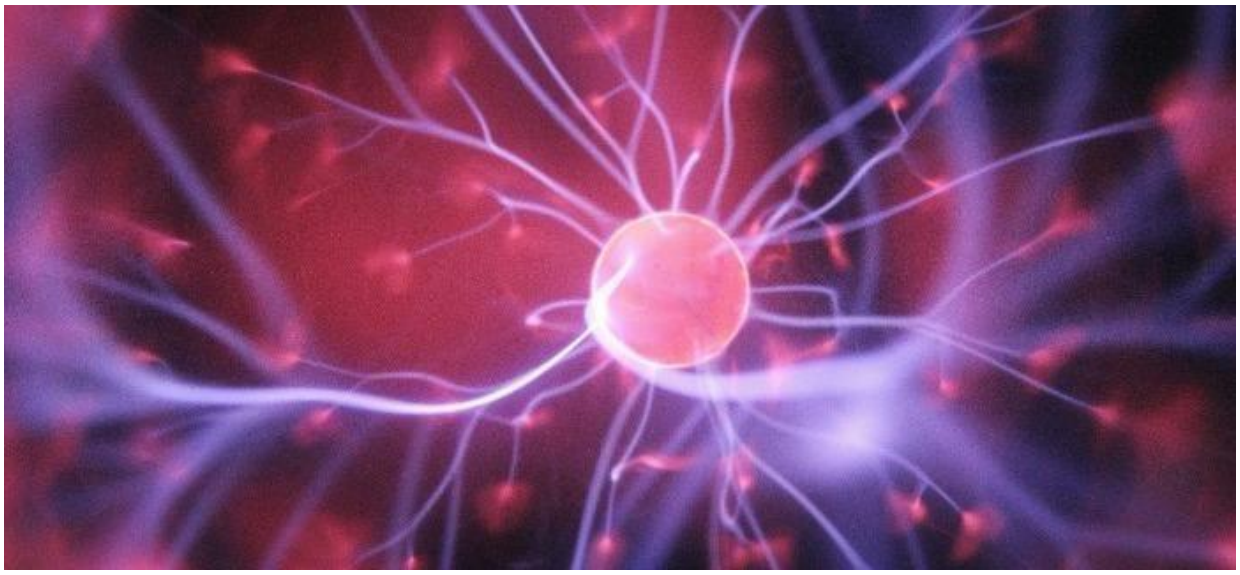
Other bodies advocate widening the definition of sport to include all physical activity. For instance, the Council of Europe include all forms of physical exercise, including those competedjust for fun.[12]

In order to widen participation, and reduce the impact of losing on less able participants,there has been an introduction of non-competitive physical activity to traditionally competitive events such as school sports days, although moves like this are often controversial.[13][14]

In competitive events, participants are graded or classified based on their "result" and often divided into groups of comparable performance, (e.g. gender, weight and age). The measurement of the result may be objective or subjective, and corrected with "handicaps" or penalties. In a race, for example, the time to complete the course is an objective measurement.

In gymnastics or diving the result is decided by a panel of judges, and therefore subjective. There are many shades of judging between boxing and mixed martial arts, where victory isassigned by judges if neither competitor has lost at the end of the match time.

A Guide to Chemistry Placements & Internships



There's so much more to a career in chemistry than working in a lab.

As a chemist, you could find yourself working on some seriously cool projects. Youcould develop new antibiotics to combat infection. Find innovative ways to protect the planet from plastic pollution. Or even advise the government on policy and regulation.

Stick with chemistry and you could make a real difference every time you go towork.

However, you're going to need more than a degree to get there. You can't just toss your graduation cap into the air, like you just don't care, and expect to walk straight into a graduate job in chemistry. Success starts with experience.

So, here is your one-stop guide to finding quality internships and placements inchemistry.

Chemistry placements

On an industrial placement, you'll spend a whole year working full-time for an employer. You'll have real responsibilities that contribute to the success of thebusiness. And will be a valuable member of the team.

Placements are incorporated into your course and take place between your secondand final year of university. They're the dill to your salmon bagel, and the start of your career in chemistry.

How many projects do you work on?

Some chemistry placements will have you **working on a single project**, while others will allow you to rotate between different departments over the course of theyear.

This will give you a chance to figure out where your strengths and interests lie. For instance, you may have had your heart set on working in R&D (Research & Development), but then discover you have the analytical mind of a chemical engineer.

Does a chemistry placement improve your job prospects?

A placement in chemistry is an opportunity to develop your technical and transferable skills, create a strong professional network, and start earning a realsalary. And if you do well, you might even get a graduate job out of it.

Personality development encompasses the dynamic construction and deconstruction of integrative characteristics that distinguish an individual in terms of interpersonal behavioral traits.[1] Personality development is ever-changing and subject to contextual factors and life-altering experiences. Personality development is also dimensional in description and subjective in nature.[2] That is, personality development can be seen as a continuum varying in degrees of intensity and change. It is subjective in nature because its conceptualization is rooted in social norms of expected behavior, self-expression, and personal growth.[3][4] The dominant viewpoint in personality psychology indicates that personality emerges early and continues to develop across one's lifespan.[5] Adult personality traits are believed to have a basis in infant temperament, meaning that individual differences in disposition and behavior appear early in life, potentially before language of conscious self-representation develop.[6] The Five Factor Model of personality maps onto the dimensions of child hood temperament.[7] This suggests that individual differences in levels of the corresponding personality traits (neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness) are present from young ages.[8]

Theories[edit]

The development of personality is supported and attempted to be explained by theories of personality.

Psychoanalytic[edit]

The Psychoanalytic Theory of personality was developed by Sigmund Freud. This theory consists of three main ideas that make up personality, the id, the ego, and the superego. Thethree traits control their own sections of the psyche. Personality is developed by the three traits that make up the Psychoanalytic theory conflicting.

Trait[edit]

The Trait Theory of personality is one of the main theories in the study of personality. According to this theory, traits make up personality. Traits can be described as patterns of behavior, thought, or emotion. Some commonly accepted trait theories are the Big Five personality traits and the HEXACO model of personality structure. Generally, strong correlations are seen in the levels of any given personality trait in an individual when they are retested several years later. Traits tend to become more stable after young adulthood, and changes in these traits often follow some noticeable trends with age. For example, the trait Honesty-Humility is typically seen to decrease during teenage years, then steadily rise asthe individual ages. The trait conscientiousness is generally seen to increase with age, however,the level of the facet perfectionism stays fairly consistent.[9]

Social cognitive[edit]

The social cognitive theory of personality views personality development in terms of reciprocal interactionism, that is, a perspective that considers the relationship of person-society as an interactive system that defines and molds personal development. Personal interaction with other individuals, society, and nature create experiences in which self-identification is organized in relation to social environment.[10] In other words, personality traits are a function of complex cognitive strategies used to effectively maneuver through social situations. Furthermore, according to the social-cognitive perspective, cognitive processes are central to an individual's unique expression of personality traits and affective processes. Through cognitivemechanism and social competencies, individuals interpret contextual situations to derive beliefsthat guide their thoughts and behaviors, thus developing an enduring pattern of personality traits.[11][10]

Evolutionary[edit]

The evolutionary theory of personality development is primarily based on the evolutionary process of natural selection.[12] From the evolutionary perspective, evolution resulted in variations of the human mind. Natural selection refined these variations based on their beneficence to humans. Due to human complexity, many opposing personality traits proved tobe beneficial in a variety of ways.[13] Primitive humans were collectivists due to tribe culture. The personalities of individuals within a tribe were very similar. The division of labor resulted in differentiation in personality traits in order to achieve a higher efficiency. Differentiation in personality traits increased functionality, therefore becoming adaptive through natural selection. Humans continued to develop personality and individuality through evolution.[14]

Lifespan[edit]

Classic theories of personality include Freud's tripartite theory and post-Freudian theory (developmental stage theories and type theories) and indicate that most personality development occurs in childhood, stabilizing by the end of adolescence. Current lifespan perspectives that integrate theory and empirical findings dominate the research literature. Thelifespan perspectives of personality are based on the the principle that personality traits are open systems that can be influenced by the environment at any
age.[5] Large-scale longitudinal studies have demonstrated that the most active period of personality development appears to be between the ages of 20–40.[5] Although personality grows increasingly consistent with age and typically plateaus near age 50, personality never reached a period of total stability.[15][16]

Humanistic[edit]

Humanistic psychology emphasizes individual choices as voluntary actions that ultimately determine personal development. Individual personalities traits, although essential to the

integrated self, are only parts that make up the whole of observable human experiences. Thus, personality development is articulated in terms of purposeful action geared towards experiencing mastery of free choice. Rather than compartmentalized elements of personality traits such as feelings, thoughts, or behavior, Humanistic psychology integrates these elements as of being in a greater encompassing system such as societies, cultures, or interpersonal relationships. Consequently, personality development is subjected to shifts in personal meaning and individual goals of achieving an ideal self.[17]

Influencing factors[edit]

Personality traits demonstrate moderate levels of continuity, smaller but still significant normative or mean-level changes, and individual differences in change, often late into the life course.[18] This pattern is influenced by genetic, environmental, transactional, and stochastic factors.[19]

Genetics[edit]

Genetics can have an impact on one's development of personality. Genes are passed on from one generation to the next and contain characteristics of one's being. Personality can be influenced through many genes acting together. Behavioral genetics refers to the results of adoption studies and twin studies.

Adoption Studies: Genetics are not very highly correlated with adoptive families and their personalities. Studies have been performed comparing adoptive siblings in a family to those who were biological siblings. A correlation of p=0.05 was found between the personalities of biological siblings and of other family members. Adoptive siblings had a correlation of p=0.04 between their personalities and the others' in the family. This shows that there is no supporting evidence for genetic differences in personality in relation to a common environment. Similar correlations were associated with parents and their adoptive children compared to their biological children.[20]

Twin Studies: Genetics can have an influence on twins. Studies have shown that identical twins' personalities are more similar than those of non identical twins. Identical twins have a correlation of about 40%. Differences in sex have not shown to have any influence on gene heritability or on individual personality.[21]

Twin and adoption studies have demonstrated that the heritability of personality traits rangesfrom 0.3 to 0.6, with a mean of 0.5, indicating that 50% of variation in observable personality traits is attributable to genetic influences.[22] In contrast, family and adoption studies have demonstrated a low heritability factor.[23] An IAT (implicit association test) on German women has found a connection between specific neurotransmitters and the predisposition for certain personality traits, such as anxiety or extraversion.[24] With the

effects of genetic similarity removed, children from the same family often appear no more alike than randomly selected strangers;[25] yet, identical twins raised apart are nearly as similar in personality as identical twins raised together. These findings suggest that shared family environment has virtually no effect on personality development, and that similarity between relatives is almost entirely due to shared genetics.[22]

Environmental[edit]

The weakness of shared environmental effects in shaping personality surprised many psychologists, spurring research into non-shared environmental effects, the environmental influences that distinguish siblings from one another.[26] The non-shared environment may include differential treatment by parents, individually-distinct reactions to the shared family environment, peer influences, experiences outside the family, and test error in measurement. In adults, the non-shared environment may also include the unique roles and environments experienced after leaving the family of origin.[27] Further effects of environment in adulthood are demonstrated by research suggesting that different work, marital, and family experiencesare associated with personality change;[28] these effects are supported by research involving the impact of major positive and negative life events on personality.[29][30]

Family and Childhood Experiences:

Family and childhood experiences can have a significant impact on the development of an individual's personality. Here are some ways in which family and childhood experiences can affect personality development:

1. Attachment style: Attachment refers to the emotional bond that an infant developswith their primary caregiver. The quality of this attachment can influence an individual's personality development. For example, individuals who develop a secure attachment style may be more likely to have positive relationships with others, whilethose who develop an insecure attachment style may be more likely to struggle with relationships.[31]
2. Parenting style: Parenting style refers to the way in which parents interact with their children. Different parenting styles can have different effects on an individual's personality development. For example, authoritarian parents, who are highly controlling and demanding, may lead to individuals who are less independent and less self- confident, while authoritative parents, who are warm and supportive but also set clear expectations and limits, may lead to individuals who are more self-confident and have better social skills.[32]

3. Family dynamics: Family dynamics, such as the level of conflict, cohesion, and communication within a family, can also affect personality development. For example, individuals who grow up in families with high levels of conflict may be more likely to experience anxiety and depression, while those who grow up in families with supportive and nurturing relationships may be more resilient and better able to cope with stress.[33]

4. Trauma and adversity: Childhood experiences of trauma, such as abuse, neglect, or exposure to violence, can have significant long-term effects on personality development. Individuals who experience trauma may be more likely to experience mental health issues such as anxiety and depression, and may also struggle with relationships and trust.[34]
5. Cultural and socio-economic background: Cultural and socio-economic background can also influence personality development. For example, individuals from collectivistic cultures, which emphasize the importance of group harmony and interdependence, may have different personality traits than those from individualistic cultures, which emphasize independence and self-achievement. Similarly, individuals from low-income backgrounds may be more likely to experience stress and adversity, which can affect their personality development.[35]

Overall, family and childhood experiences play a critical role in personality development. Understanding the impact of these experiences is essential for promoting healthy development and providing support to individuals who may have experienced trauma or adversity.[36]

Peer Relationships:

Peer relationships can have a significant impact on the development of an individual's personality. Peer relationships refer to the interactions and social connections that an individual has with their peers, such as friends, classmates, and acquaintances. Here are someways in which peer relationships can affect personality development:

1. Socialization: Peer relationships provide opportunities for socialization, which is the process of learning and internalizing social norms, values, and expectations. Through interactions with peers, individuals learn how to behave in social situations, develop communication and negotiation skills, and learn to regulate their emotions and behaviors in ways that are acceptable to others.[37]
2. Identity formation: Peer relationships can also influence the development of an individual's identity. Adolescence is a time when individuals are trying to define who they are and what they stand for. Through interactions with peers, individuals can explore different aspects of themselves and develop a sense of identity.[38]
3. Risk-taking behavior: Peer relationships can also influence risk-taking behavior. Adolescents who have peers who engage in risky behaviors, such as drug use or delinquency, may be more likely to engage in these behaviors themselves. On the other hand, adolescents who have peers who engage in prosocial behaviors, such as volunteering or academic achievement, are more likely to engage in these behaviors themselves.[39]

Gene-environment interactions[edit]

A culmination of research suggests that the development of personality occurs in relation to one's genetics, one's environment, and the interaction between one's genetics and environment.[40][41] Van Gestel and Van Broeckhoven (2003) write, “Almost by definition, complex traits originate from interplay between (multiple) genetic factors and environment.”[42] The [illegible] states that “life experiences may accentuate and reinforce the personality characteristics that were partially responsible for the particular environmental elicitations in the first place”.[43] This principle illustrates how gene-environment interactions maintain and reinforce personality throughoutthe lifespan. Three main types of gene-environment interactions are **active** (the process by which individuals with certain genotypes select and create environments that facilitate the expression of those genotypes), **passive** (the process by which genetic parents provide both thegenes and the early environmental influences that contribute to the development of a characteristic in their children), and **reactive** (the process by which non-family individuals respond to the behavior produced by a genotype in characteristic ways).[22][29]

An example of the way environment can moderate the expression of a gene is the finding by Heath, Eaves, and Martin (1998) that marriage was a protective factor against depression in identical twins, such that the heritability of depression was as low as 29% in a married twin and as high as 51% in an unmarried twin.[44]

Stability[edit]

Over the course of an individual's lifespan, the stability of their personality has been shown ina meta-analysis of longitudinal studies to be variable, although this variability levels out in adulthood. The beginning of one's personality stability is most evident at the age of 25 years.[45] Behavioral genetics can account for the variability experienced across the lifespan. This is highly evident in the transitions between childhood, adolescence, and adulthood. From childhood to mid-adolescence, the rate of individual differences in personality increases, primarily due to environmental influences. However, genetic influences play a larger role than environmental influences in adulthood, resulting in fewer individual differences in personality between individuals who share similar genetics.[46] In a longitudinal study of individuals across the span of fifty years from adolescence through adulthood, personality was found to be malleable, although variations in the level of malleability stabilized in adulthood.[47]

The personality developing in college students based on the Big Five personality trait domains and facets within those domains has been studied. Rank-order stabilities of facets are high, with values greater than .50 (indicating a strong correlation); the results for trait domains were similar to individual facets.[48] Variation in stability occurs across periods of the lifespan,such as adolescence and adulthood.[40]

The stability and variation of personality is explained by a complex interaction between one's genetics and one's environment.[46]

What is Letter Writing?

A letter is a type of written communication that can be written by hand or printed on paper. Although it is not required, it is frequently conveyed to the receiver via mail or post in an envelope. A letter, or a written discussion betweentwo parties, is any such message that is sent through the mail.

The art of letter writing has taken a backseat now that E-mails (Advantages andDisadvantages), SMS, and other means of communication have become the norm.However, letters are still used for a lot of our communication, especially official communication. Letters are still a crucial means of communication, whether it's acover letter for a job, a bank reminder, or a college acceptance letter. This is whywe must understand the nuances of letter writing.

Also Read: Letter of Explanation

Why is it Important to Know How to Write a Letter?

Everyone needs to know how to write a letter, whether it's for professional or personal reasons. These letters may be short, informal emails at times. They'll be well-polished for corporate correspondence at other times. Today, printed lettersare commonly used for professional or commercial communications, therefore knowing how to compose a letter for professional purposes is essential. It's especially vital to write a letter appropriately if you're sending a printed copy tothe recipient rather than an email.

Also Read: How to Write a Motivation Letter with Examples & Samples

How to Write a Letter?: Step-by-Step Guide

The following are the general guidelines for writing a letter:

Choose the Right Type of Paper

You should type and print your letter on plain white paper. You may wish to printon nice resume paper depending on the circumstances for example if you're sending a letter of reference or a cover letter with your resume. If you're writing abusiness letter on behalf of your company, it's a good idea to use company letterhead.

Use the Font and Format

Your letter should be typed and printed on plain white paper. Depending on the circumstances—for example, if you're sending a letter of reference or a **cover letter** with your **resume**—you might want to print on excellent resume paper. It's a good idea to utilize company letterhead when sending a business letter on behalfof your company.

Write Sender's Address

To begin, write your complete address in the upper left-hand corner, including your entire name, street address, city, state, and zip code. Learn how to write anaddress properly if you're not comfortable with it.

Specify Dateline

Specify the date by skipping a line. Use the date you're writing the letter.

Come to Recipient's address

Place the recipient's entire address after skipping a line. The firm name, the recipient's name and title, and the postal address must all be included in a professional letter. There's no reason to mention the firm name or job position inan informal, personal letter.

Insert Greeting/Salutation

To put the welcome, skip one more line. This is referred to as salutation. In a formal letter, you say "Dear Mr./Ms./Mrs. Last Name:" After the greeting, formalletters require a colon, whereas informal ones demand a comma. It's acceptable touse the recipient's first name followed by a comma in an informal letter.

Body of Letter

Start the letter by skipping a line. Separate your thoughts into paragraphs in thebody of your letter. You should never write a large block of text in one sitting.
Begin a new paragraph for each new collection of thoughts or ideas. Betweenparagraphs, leave a blank line.

Include Complimentary Close

To incorporate a complimentary close, skip one of your final lines. “Sincerely,” “Yours truly,” “Regards,” or something similar can be used as a closure. Whetherthe letter is official or casual, a comma should always follow the word or phrase you choose to close it.

Signature Text

Skip three lines (where your handwritten signature will be inserted) and input your entire name. On the next line of a formal letter, you should also add your jobtitle.

Attachments

Skip one more line and type “Enclosure” if you’re including any attachments withyour letter. If there are multiple attachments, use parentheses to indicate how many there are, as in “Enclosures (4).”

Also Read: How to Write a Letter of Resignation

Types of Letter

Here are the different types of letters:

- Chain letter
- Letters patent
- Audio letter

- **Cover letter**
- Recommendation Letter and the closely related employment reference letter
- Letter of credence
- Crossed letter
- **Informal letter**
- Poison pen letter
- Hate mail
- Business letter
- Form letter
- **Letter of intent**
- Hybrid mail (semi-electronic delivery)
- Letter of thanks
- Dear John letter
- Love letter
- **Letter of interest**
- Cease and desist letter
- Complaint letter
- Query letter
- **Letter of resignation**
- Letter to the editor
- National Letter of Intent
- Open letter
- Letter of introduction
- Letter of marque
- Epistle

What Type of Letter Should You Write?

In this game, there are no hard and fast rules. You'll want to employ a different letter-writing structure depending on who you're writing to. The greatest choice isusually a casual discussion with a friend or close relative. Many different types of letters can be written for a close family or acquaintance. Here are a few examples:

- Handwritten letters
- Emailed letters
- Typed social media messages

In this game, there are no hard and fast rules. You'll want to employ a different letter-writing structure depending on who you're writing to. The greatest choice isusually a casual discussion with a friend or close relative. Many different types of letters can be written for a close family or acquaintance. Here are a few examples:

- **Cover letters**
- Letters of intent
- Value proposition letters
- Business memorandum letters
- Promotion letters
- Reference letters
- **Resignation letters**
- Thank-you letters

Also Read: Reference Letter vs Letter of Recommendation

What is a Formal and Informal Letter?

Let us have a look at some significant differences between formal and informaltypes of letters:

FORMAL LETTER	INFORMAL LETTER
It is written for professional or business purposes	It is usually drafted for personal purposes
A completely formal writing tone is used	A casual and emotional writing style is common type of letter-writing
It should be precise and to the point	Informal letters can be lengthy
Examples- Clients, College or Institute	Examples- Relatives or Friends

Types of Letter Writing

Let us talk about the **different types of Letter Writing** in a broader spectrum of formal and informal letters. Let us check some of the types of letter writing otherthan formal and informal letters:

- **Business Letter:** This letter is written for business purposes and contains information like quotations, orders, claims, complaints, letters for collection,etc. These letters are extremely formal and follow a proper structure
- **Official Letter:** This letter is written to inform offices, branches, and subordinates. These are for official information like rules, regulations, events,procedures, etc
- **Social Letter:** A social letter is a personal letter written on the occasion of aspecial event. This includes invitations, congratulatory letters, condolence letters, etc
- **Circular Letter:** A circular letter announces information to a large number ofpeople. The letter is circulated to a large group to share information on change of address, change in management, the retirement of a partner etc.
- **Employment Letter:** It is the type of letter that is written for the employment process like a joining letter, promotion letter, application letter,etc

Must Read: How to Write a Joining Letter?

Formal Letter Writing

While writing a formal letter, it is mandatory to stick to the format and follow asubtle and professional tone as these letters are written for official purposes and contain a professional issue to talk about. Following is a **format** of formal letter writing:

- **Sender's Address**: Mention the complete and accurate sender's address in thetop left section.
- **Date:** It is mandatory to put in the date just below the address.
- **Reciever's Address:** The appropriate address of the receiver has to be mentioned in a similar order to the sender's with the exact designation ofthe concerned person.
- **Subject:** The subject is a one-line summary of the issue that is mentioned inthe letter. It should be written very briefly within one line.
- **Greetings:** Keeping in mind that it is a formal letter, the salutation must beformal and respectful. You can use Sir or Madam in this case.
- **Letter Body:** It is the most important part of the letter. You can divide the content into two or three paragraphs as per the details. It should be formaland to the point.
- **Signature:** While closing the letter, you can use 'Yours Faithfully' and then mention your name at the end.

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WELCOME

College activities

Special features about Chemistry department

1.International Environment Day
2.World food safety day
3.World ozone day
4.World food day
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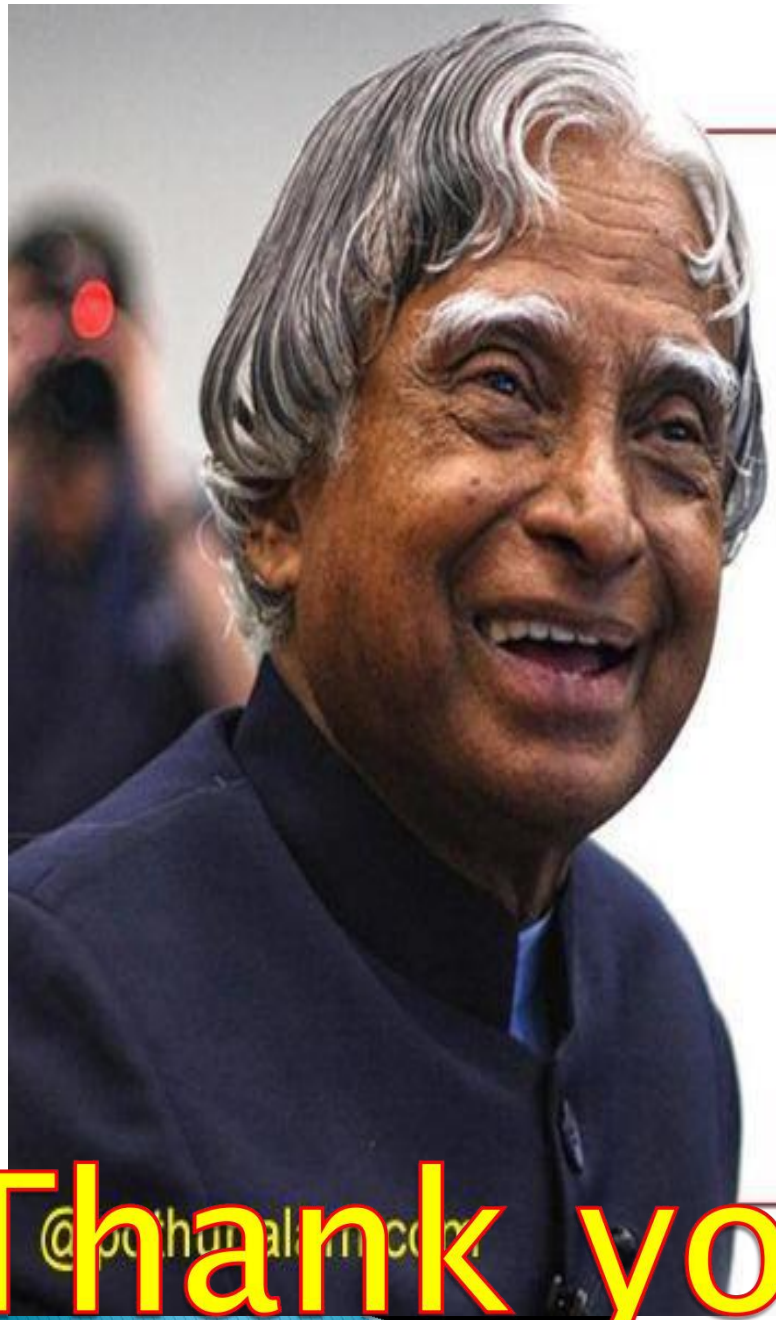
6.Department national seminar 7.National science day
8.World water day
9.World earth day
10.Industrial visit

College committees

1. Placement cell
2. Counseling cell
3. E cell 4.Consumer club 5.Examination cell6.Admission cell
7. Anti Ragging cell
8. IPR Cell
9. MOOC
10. Library ……19 committees



அழகை பற்றி கனவு
காணாதீர்கள் அது உங்களின்
கடமையை பாழாகி விடும்...
கடமையை பற்றி கனவு
காணுங்கள் அது உங்கள்
வாழ்க்கையை அழகாக்கும்!

டாக்டர் ஏ பி ஜே அப்துல் கலாம்

Thank you

What is Chemistry?

Definition: Chemistry is the study of matter and its changes from one substance to another.

Chemistry is central to all sciences and overlaps with physics, biology, geology, and astronomy.

Learning about chemistry teaches you about the benefits and risks associated with chemicals and will help you to be an informed citizen and make intelligent choices concerning the world around you.

Chemistry teaches you to solve problems and communicate with others in an organized and logical manner.

What is chemistry

Chemistry is the study of matter and energy and the interactions between them :
Its composition
structure
properties
reactions

BRANCHES OF CHEMISTRY

1: Organic Chemistry

2: Inorganic Chemistry

3: Physical Chemistry

4: Biochemistry

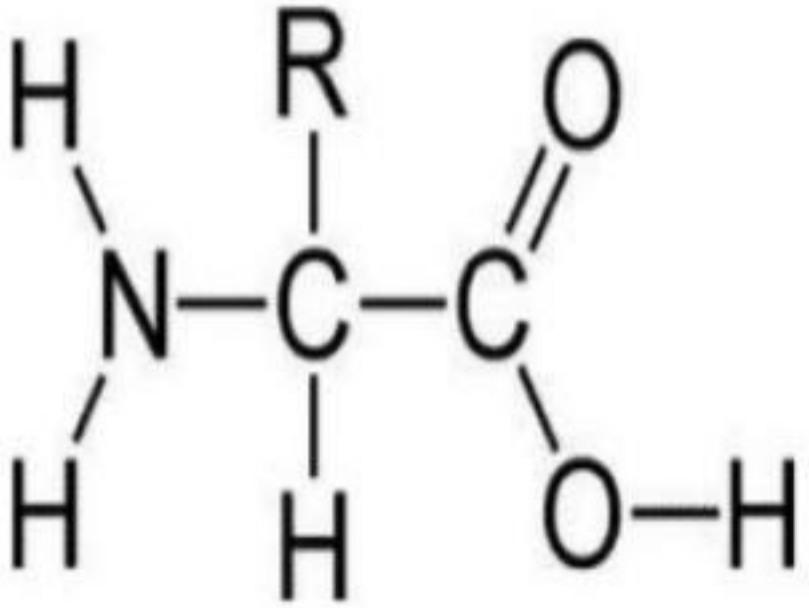
5: Analytical Chemistry

Other BRANCHES OF CHEMISTRY

- 1: nanochemistry
- 2: combinatorial chemistry
- 3: astrochemistry
- 4: environmental chemistry
- 5: food chemistry
- 6: solid state chemistry
- 7: material chemistry
- 8: forensic chemistry
- 9: medical chemistry

ORGANIC CHEMISTRY

is the branch of chemistry which deals with ***carbon-containing compounds***.

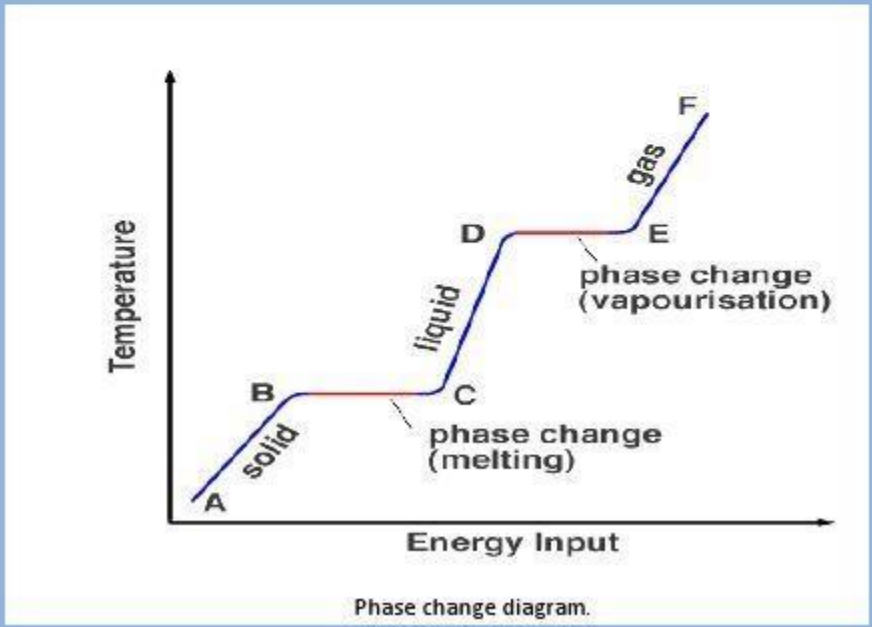


Inorganic Chemistry

This branch of chemistry deals with substances not containing carbon and that are not organic. Examples of such substances are minerals found in the earth's crust and non-living matter. There are many branches of inorganic chemistry. They include bioinorganic chemistry, nuclear science and energy, geochemistry, and synthetic inorganic chemistry, just to name a few.

Physical Chemistry

- Deals with physical properties of a material
  - Properties that can be measured



Phase change diagram.

- Examples:
  - Temperature
  - Freezing Point
  - Melting Point
  - Boiling Point
  - Density
  - Color

What is analytical chemistry?

- Analytical chemistry is what analytical chemists do.
- Analytical chemistry is a measurement science consisting of a set of powerful ideas and methods that are useful in all fields and midicine.
- Analytical chemistry is a science of measurement and characterization.
- Analytical chemistry is a science of instrumentation and measurements.

What is Biochemistry?

- Biochemistry is the study of the chemical interactions of living things.
- Biochemists study the structures and physical properties of biological molecules.
  - Often are involved in the manufacture of new drugs and medical treatments

Definition

Green chemistry is “the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances”

"In nature nothing is created, nothing is lost, everything changes."

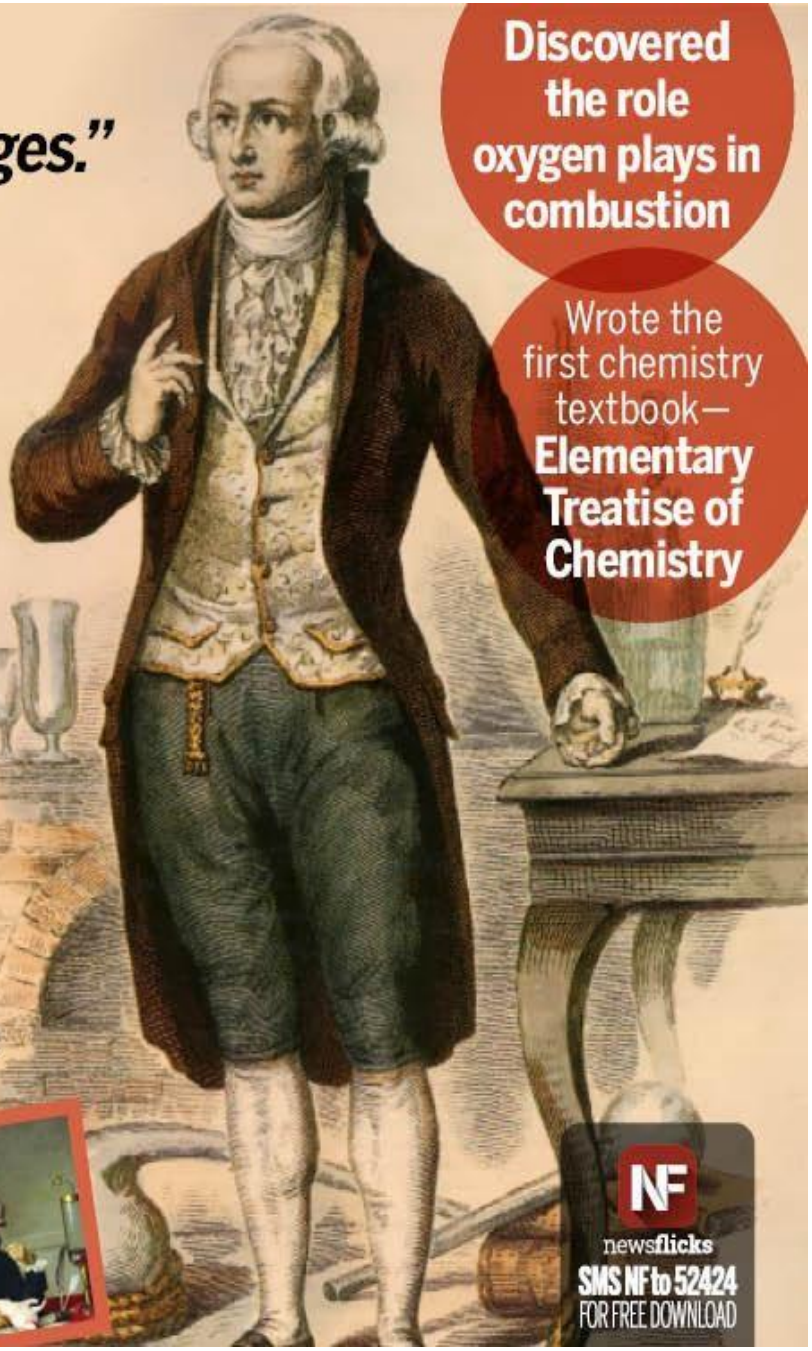
French chemist **Antoine Lavoisier** died on 8 May 1794

FATHER OF MODERN CHEMISTRY

Recognized and named oxygen and hydrogen; first person to establish that that water is a compound

Discovered that matter may **change its form or shape** but its mass always remains the same

His wife, Marie-Anne, helped his research by translating English doc uments to French and drew illustrations for his scientific papers



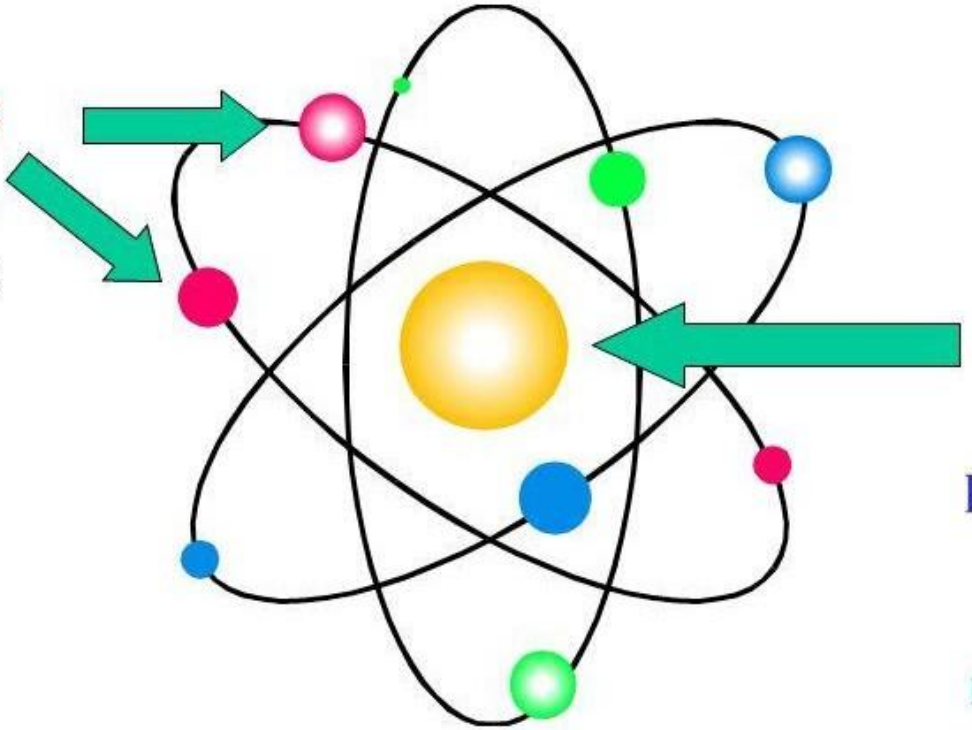
Discovered the role oxygen plays in combustion

Wrote the first chemistry textbook— **Elementary Treatise of Chemistry**

Atom

- Is now defined as the smallest particle of an element that retains the chemical properties of that element. Made of subatomic particles

Electrons
-have a
negative
charge



Nucleus
Protons –
positive charge
and
Neutrons -
neutral charge

The Atom

Contains ***3*** subatomic particles:

Neutron – nucleus particle with *no* charge.

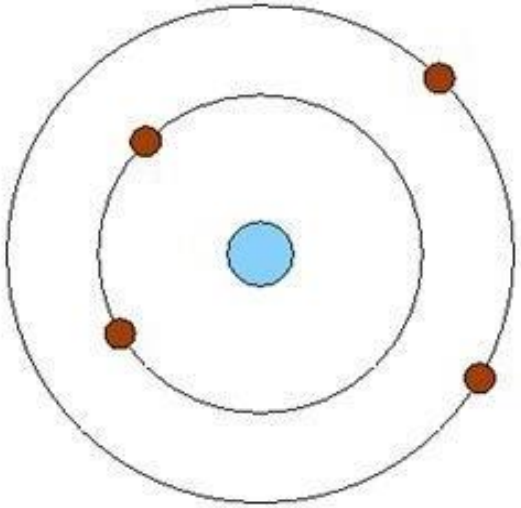
- can vary within an element - **ISOTOPES**.

Proton – nucleus particle with a *positive* charge.

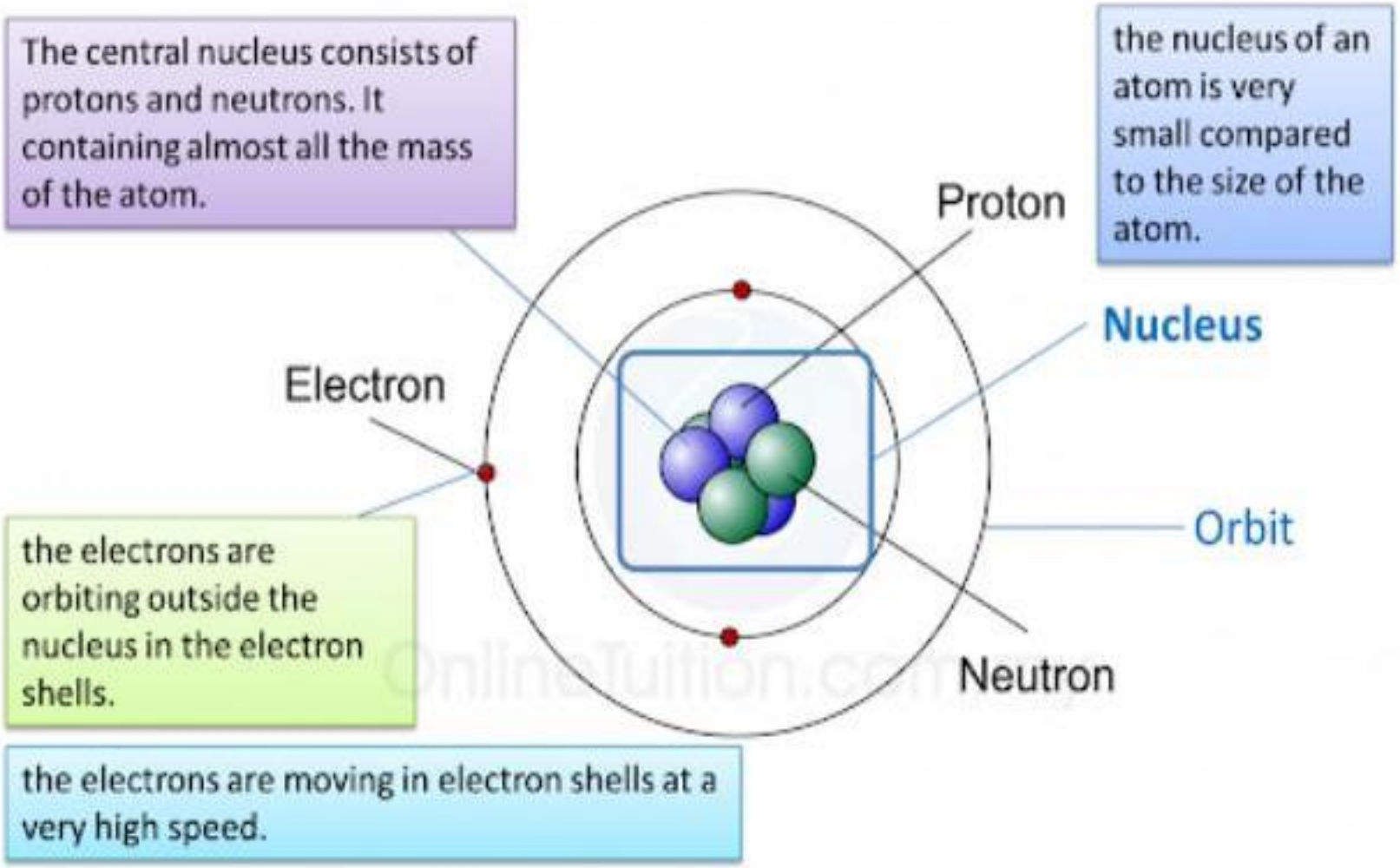
Electrons – *negative* particles move in specific *orbits*.

- e^- *jump/drop orbits releasing energy.*

- same # of positive and negative charges = neutral.



The Subatomic Particles



Molecules

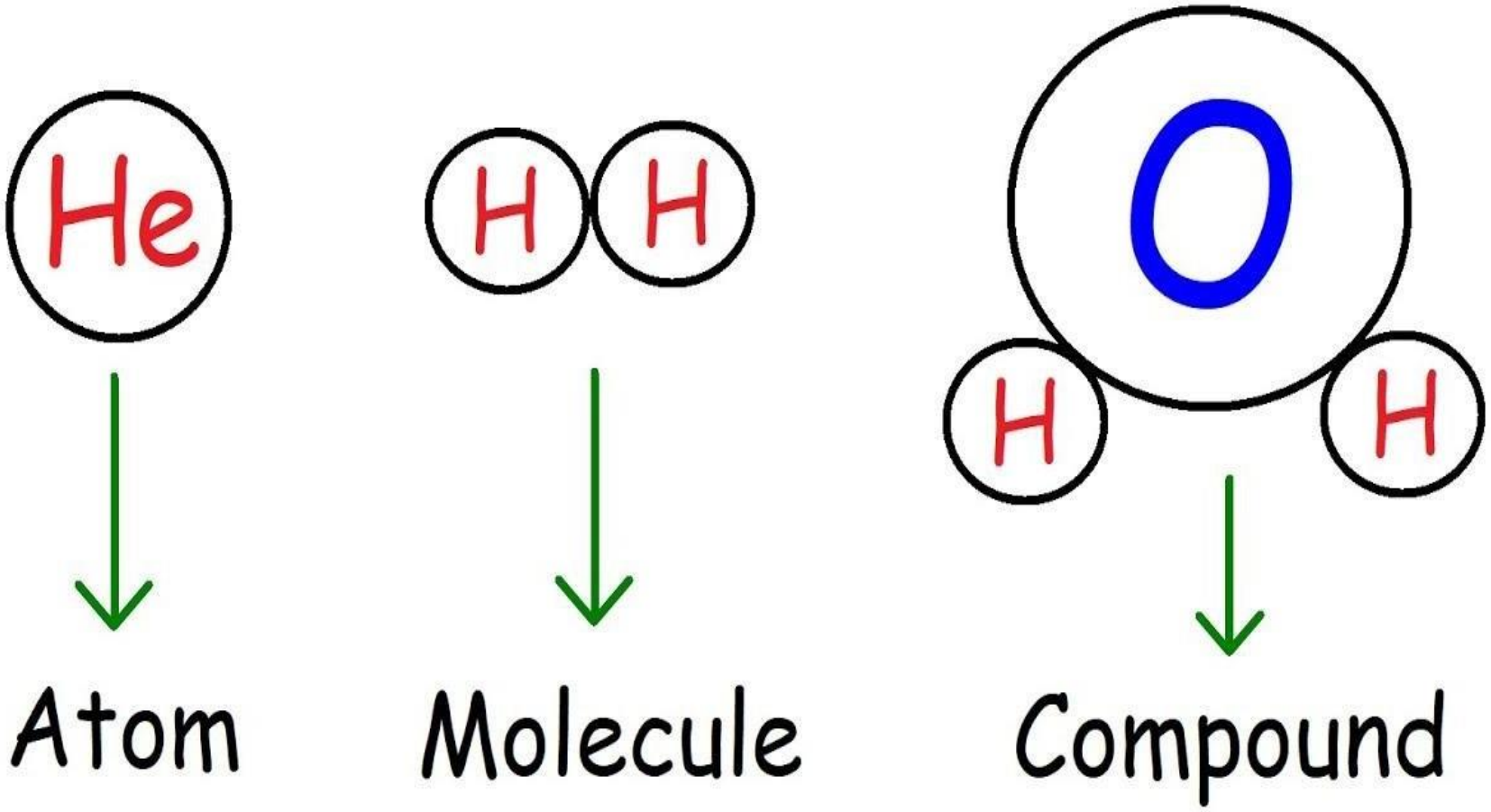
- A molecule is a group of atoms that have joined together into one piece.
- Molecules have 2 or more atoms in them, and some molecules have thousands or more atoms in them.
- Here are some common molecules:

Water: H_2O

Nitrogen: N_2

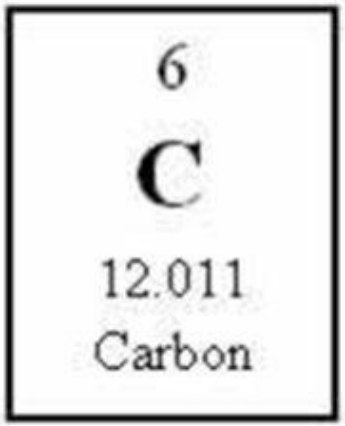
Carbon Dioxide: CO_2

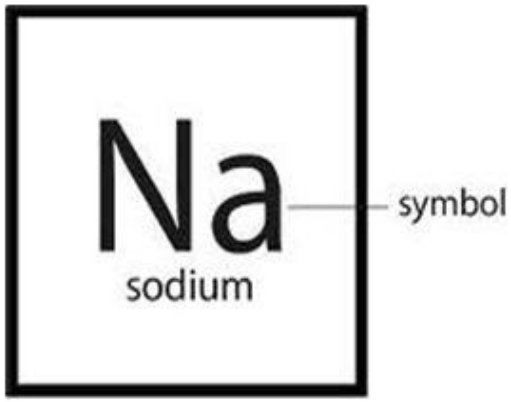
Atoms vs Molecules



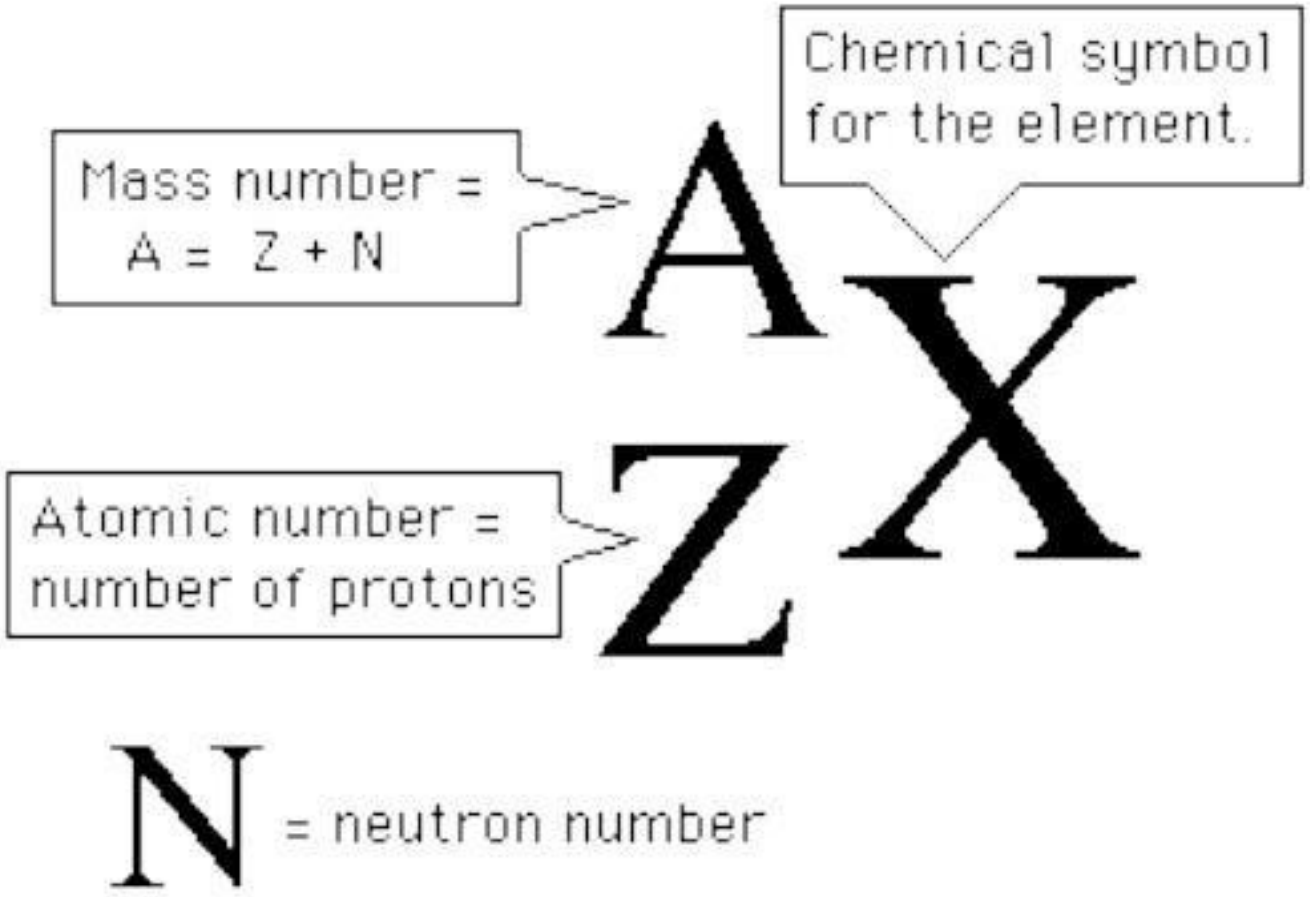
Chemical Symbols

A one or two letter code for a chemical element. Only the first letter is capitalized



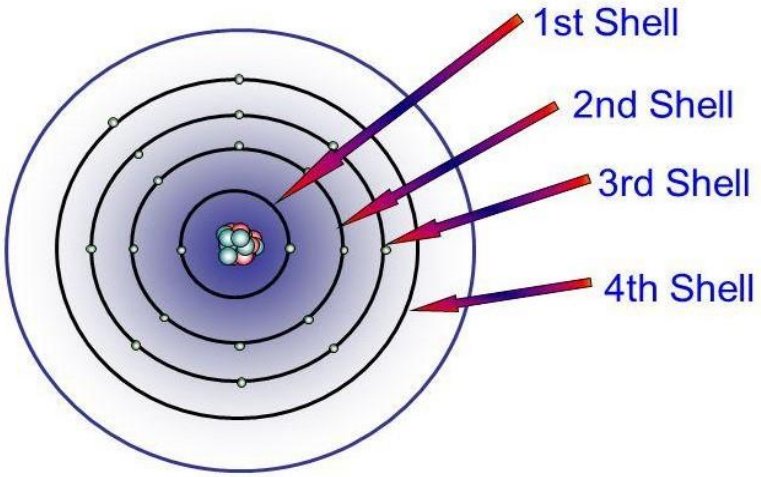


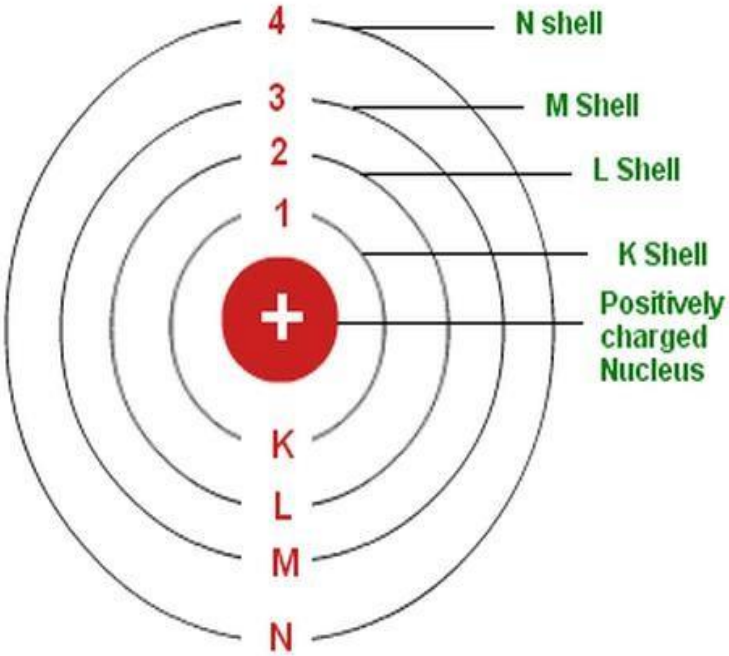
Notation


Chemical symbol for the element.
Mass number =
A = Z + N
A
X
Z
Atomic number =
number of protons
N
= neutron number

How Are Electrons Arranged?

- Electrons are not evenly spread.
- The exist in layers known as shells.
- The *arrangement* of electrons in these shel often called the *electron configuration*.

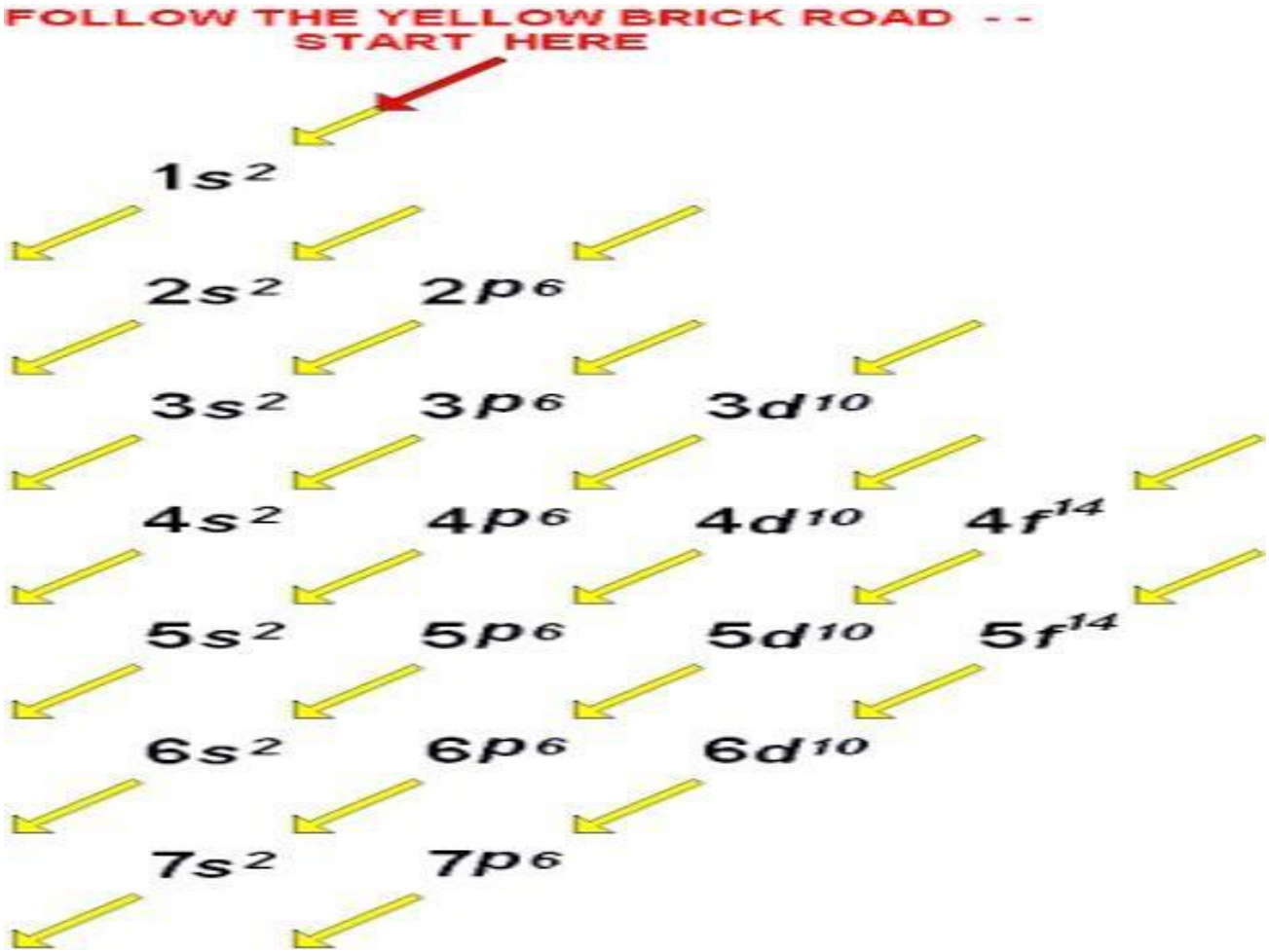




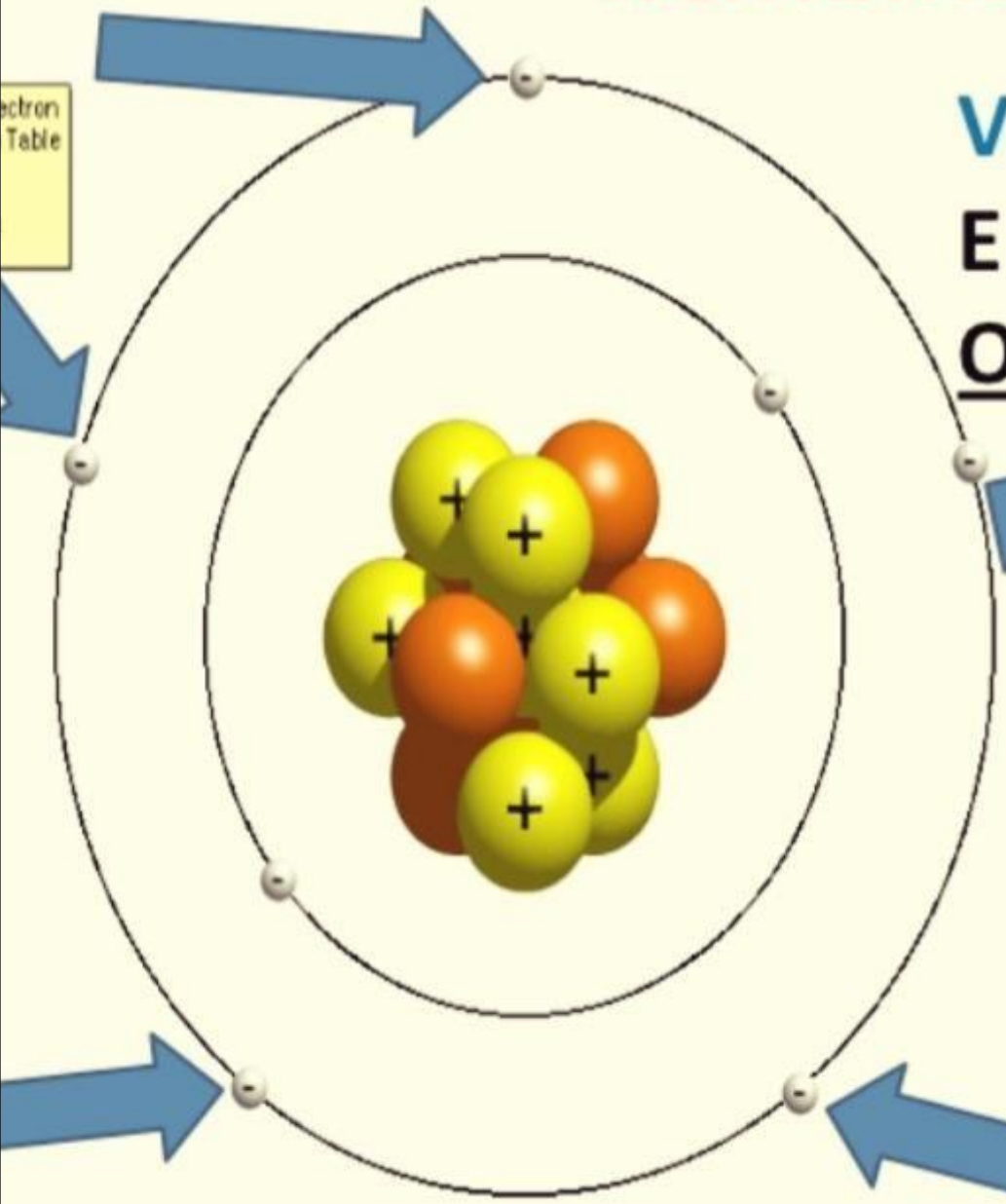
Shells, Subshells, Orbitals

Shell (Corresponds to period)	# of subshells	subshells	# orbitals	# electrons
n = 1	1	1*s*	1	2
n = 2	2	2*s*	1	2
		2*p*	3	6
n = 3	3	3*s*	1	2
		3*p*	3	6
		3*d*	5	10
n = 4	4	4*s*	1	2
		4*p*	3	6
		4*d*	5	10
		4*f*	7	14

- The number of subshells in a shell = shell number
- The first subshell s has 1 orbital. Each successive subshell adds 2 more orbitals (1, 3, 5, 7, etc).
- Each orbital can hold only 2 electrons of opposite spin.
- An atom with n = 3 also includes all subshells and orbitals for n < 3:
  - 1s, 2s, 2p, 3s, 3p, 3d


FOLLOW THE YELLOW BRICK ROAD --
START HERE
1s2
2s2 2p6
3s2 3p6 3d10
4s2 4p6 4d10 4f14
5s2 5p6 5d10 5f14
6s2 6p6 6d10
7s2 7p6

REMEMBER….

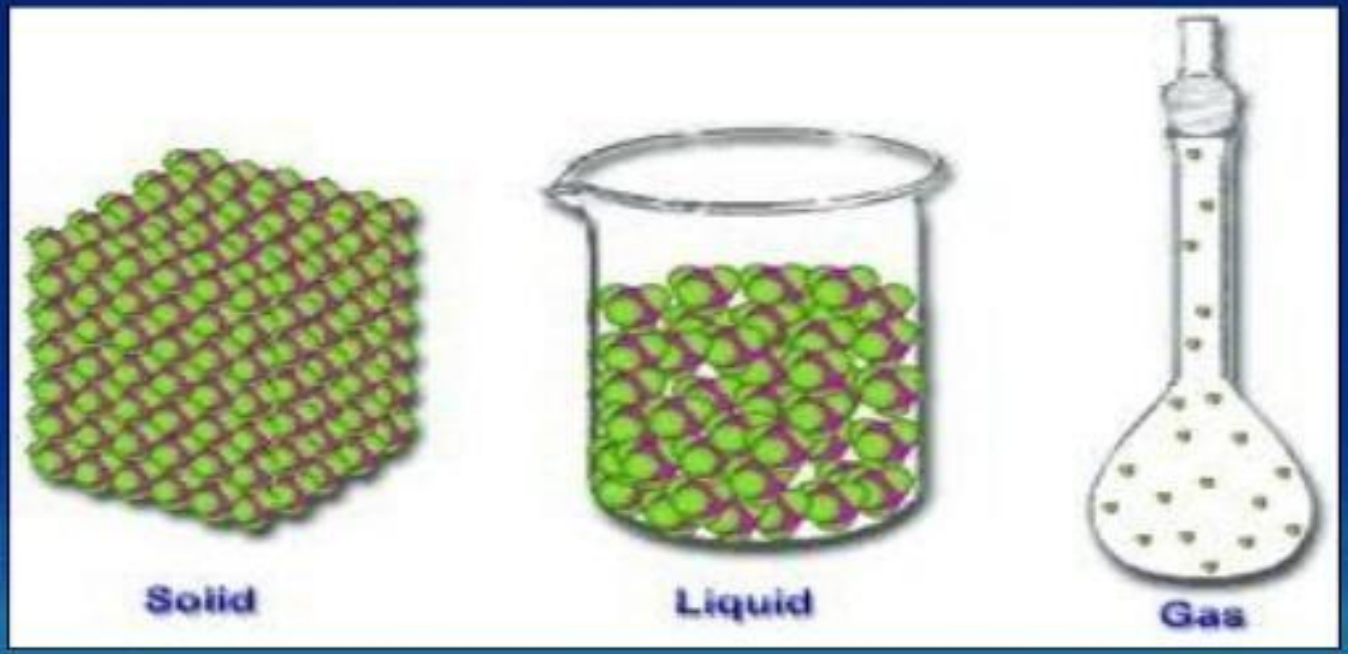


VALENCE ELECTRONS:

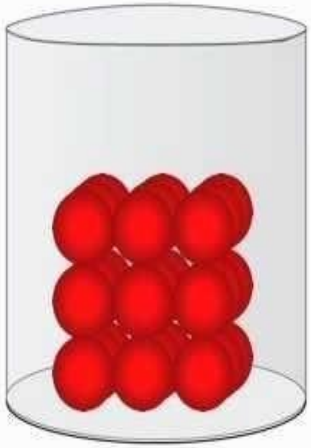
ELECTRONS IN THE OUTERMOST RING

What is matter?

Anything that has mass and occupies space is called Matter.



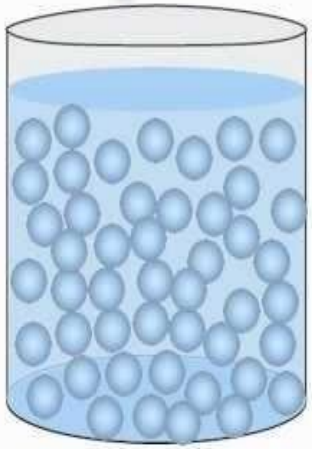
solid



- rigid
- fixed shape
- fixed volume

cannot be squashed

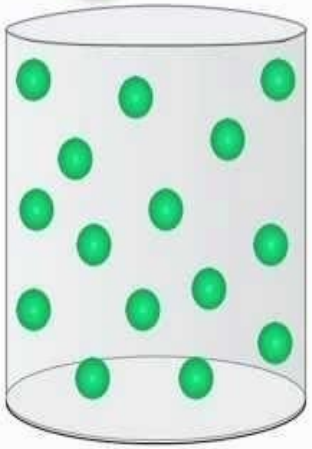
liquid



- not rigid
- no fixed shape
- fixed volume

cannot be squashed

gas

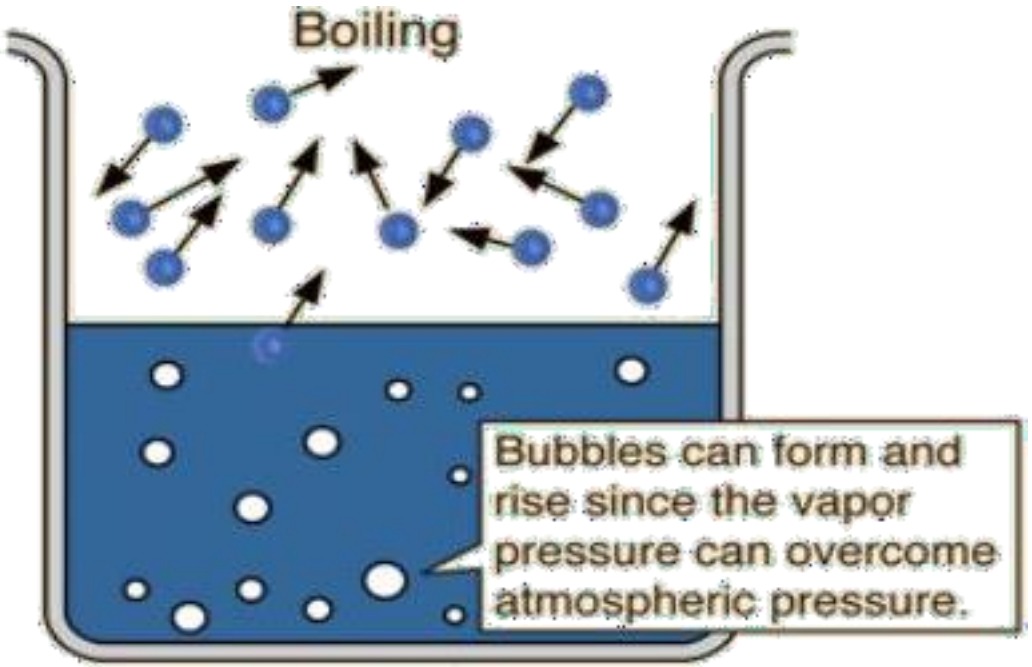


- not rigid
- no fixed shape
- no fixed volume

can be squashed

Solids, Liquids and Gases

	Properties	Solids	Liquids	Gases
1	**Mass**	Definite	Definite	Definite
2	**Shape**	Definite	Acquires the shape of the container	Acquires the shape of the container
3	**Volume**	Definite	Definite	Indefinite
4	**Compressibility**	Not possible	Almost Negligible	Highly Compressible
5	**Fluidity**	Not possible	Can flow	Can flow
6	**Rigidity**	Highly rigid	Less rigid	Not rigid
7	**Diffusion**	Slow	Fast	Very fast
8	**Space between particles**	Most closely packed 	Less closely packed 	Least closely packed 
9	**Interparticle force**	strongest	Slightly weaker than in solids	Negligible

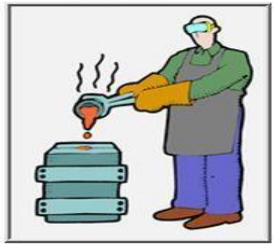


Definition of b.p.

The boiling point of a liquid is the temperature at which its vapor pressure is equal to the pressure of the gas above it

MELTING POINT

More Vocabulary:



melting point

The <u>temperature</u> at which a solid changes into a liquid.

Add to sentence box for melting point:

Ice's melting point is 0°C

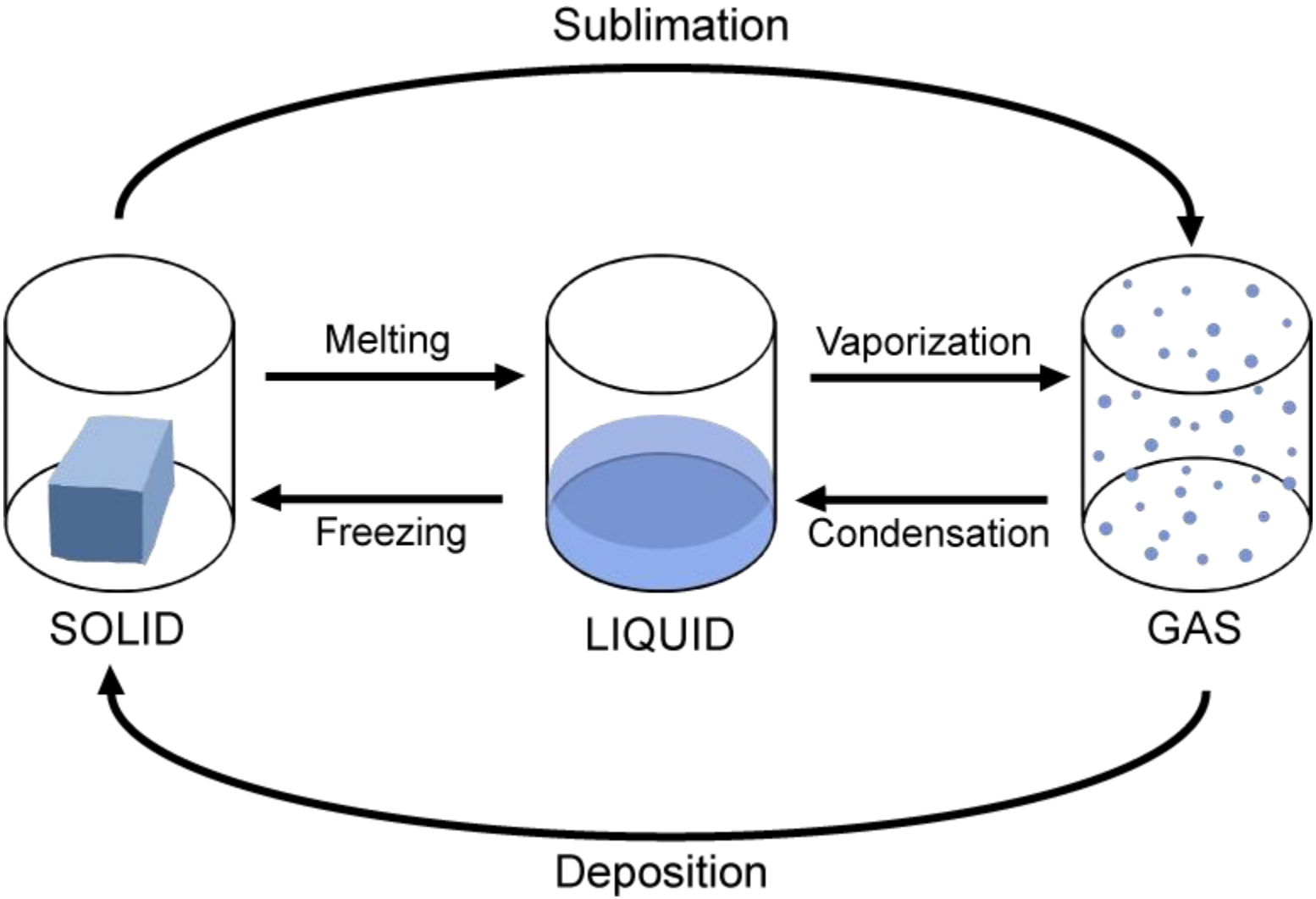
FREEZING PROCESS

Freezing : Change (transfer) of matter from **liquid** state to **Solid** state by **Cooling**.

Definition

- **Sublimation** is the transition of a substance from the solid phase to the gas phase without passing through an intermediate liquid phase.

Solid↔ vapor


Sublimation
Melting
Vaporization
Freezing
Condensation
SOLID
LIQUID
GAS
Deposition

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Cuddalore - 607109
Accredited by NAAC with "B" Grade

World food safety day

June 7, 2021

Food safety tips
During Covid 19

By

Department of Chemistry

Dr.R.Hemalatha HOD Department of Chemistry KCSAMW

2021 THEME - “Safe food now for a healthy tomorrow”

Dr.R.Hemalatha HOD Department of Chemistry KCSAMW

Food safety is everyone's business

1. Ensure it's safe - Government must ensure safe and nutritious food for all
2. Grow it safe - Agriculture and food producers need to adopt good practices
3. Keep it safe - Business operators must make sure food is safe
4. Eat it safe: All consumers have a right to safe, healthy and nutritious food
5. Team up for safety – Food Safety is a shared responsibility

4 STEPS TO FOOD SAFETY

CLEAN

SEPARATE

COOK

CHILL

Dr.R.Hemalatha HOD Department of Chemistry KCSAMW

THE WHO FIVE KEYS TO SAFER FOOD

Food safety principles that all food handlers should follow:

1. KEEP CLEAN
2. SEPARATE RAW AND COOKED FOOD
3. COOK FOOD THOROUGHLY
4. KEEP FOOD AT SAFE TEMPERATURES
5. USE SAFE WATER AND RAW MATERIALS

KEY MESSAGES

There is no food security without food safety If it is not safe, it is not food.

Only when food is safe will it meet dietary needs andhelp ensure that everyone can live an active and healthy life.

This is also referred to as the utilization dimension offood security.

Safe food is essential to human health and well-being

The World Health Organization estimates that more than 600million people fall ill and 420 000 die every year from eating food contaminated with bacteria, viruses, parasites, toxins orchemicals. However, these numbers represent only 'the tip ofthe iceberg' as comprehensive surveillance data for food borne illnesses is not available everywhere.

When food is not safe, humans cannot benefit from itsnutritional value and cannot grow and develop.

Investing in food safety today will reap future rewards

Safe food production improves economic opportunities byenabling market access and productivity.

At the same time, good practices along the supply chain improve sustainability, minimizing environmental damage and the amount of agricultural product that hasto be discarded.

Unsafe or contaminated food leads to trade rejections,economic losses and food loss and waste.

The ‘One Health’ approach improves food safety

Food safety requires a holistic approach, such as ‘One Health’, which recognizes the connection between the health of people, animals, plants and the environment.

Animal and plant health are critical to agricultureproducing enough food to feed the world.

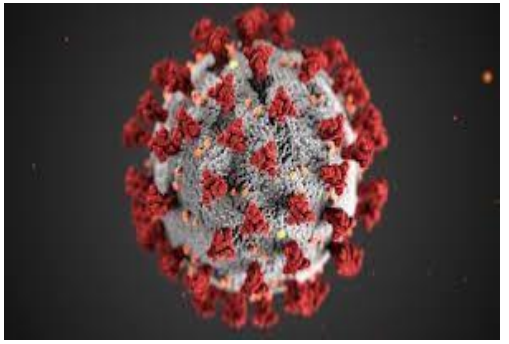
Keeping animals healthy will also minimize the risk of zoonotic pathogens (disease-causing organisms that can betransmitted between animals and humans), antimicrobial resistant organisms and more.

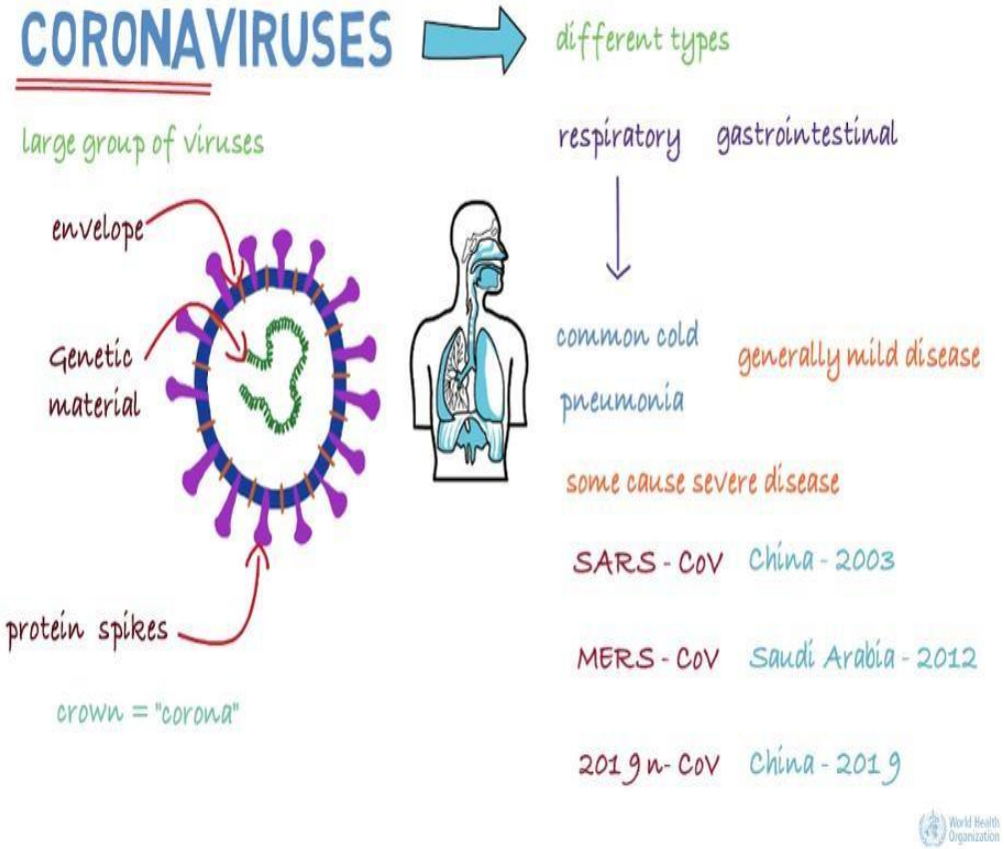
Food safety is based on science

- **Looking at or smelling food is not a reliable way to check ifit is safe, but scientists have developed tests and tools to do so.**

- **Food scientists, microbiologists, veterinarians, medical doctors and toxicologists, to name a few, advise what food production, processing, handling and preparation practicesare needed to make and keep food safe.**
- **When food safety practices are employed across the foodchain, the result is safe food**

Food safety tips During covid -19





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Food Safety Tips During COVID-19

Grocery Shopping

- Use disinfectant to wipe down cart or basket
- Examine produce with your eyes, not hands. Wash before eating
- Wipe down reusable shopping bags before and after use

Takeout & Delivery

- Ask for no-contact delivery: pay ahead of time and have order left at the door
- Wash hands after removing food from packaging and after throwing packaging away

Meal Delivery Kits

- Wash hands before opening boxes and after emptying them
- Practice normal safe food handling procedures, like separating meat and poultry from other foods

verywell

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How to improve our immune system

Healthy Eating Tips To Boost Your Immune System

Strengthen Your Immune System And Stay Healthy!

Eat When Food Is Hot

Micro-organisms cultivate at room temperature

Eat More Cooked Leafy Vegetables

Spinach & kale are rich sources of iron and B vitamins

Eat Fruits Rich In Enzymes

Papaya, pineapple, kiwi, mango can aid digestion

Add Ginger, Garlic & Black Pepper When Cooking

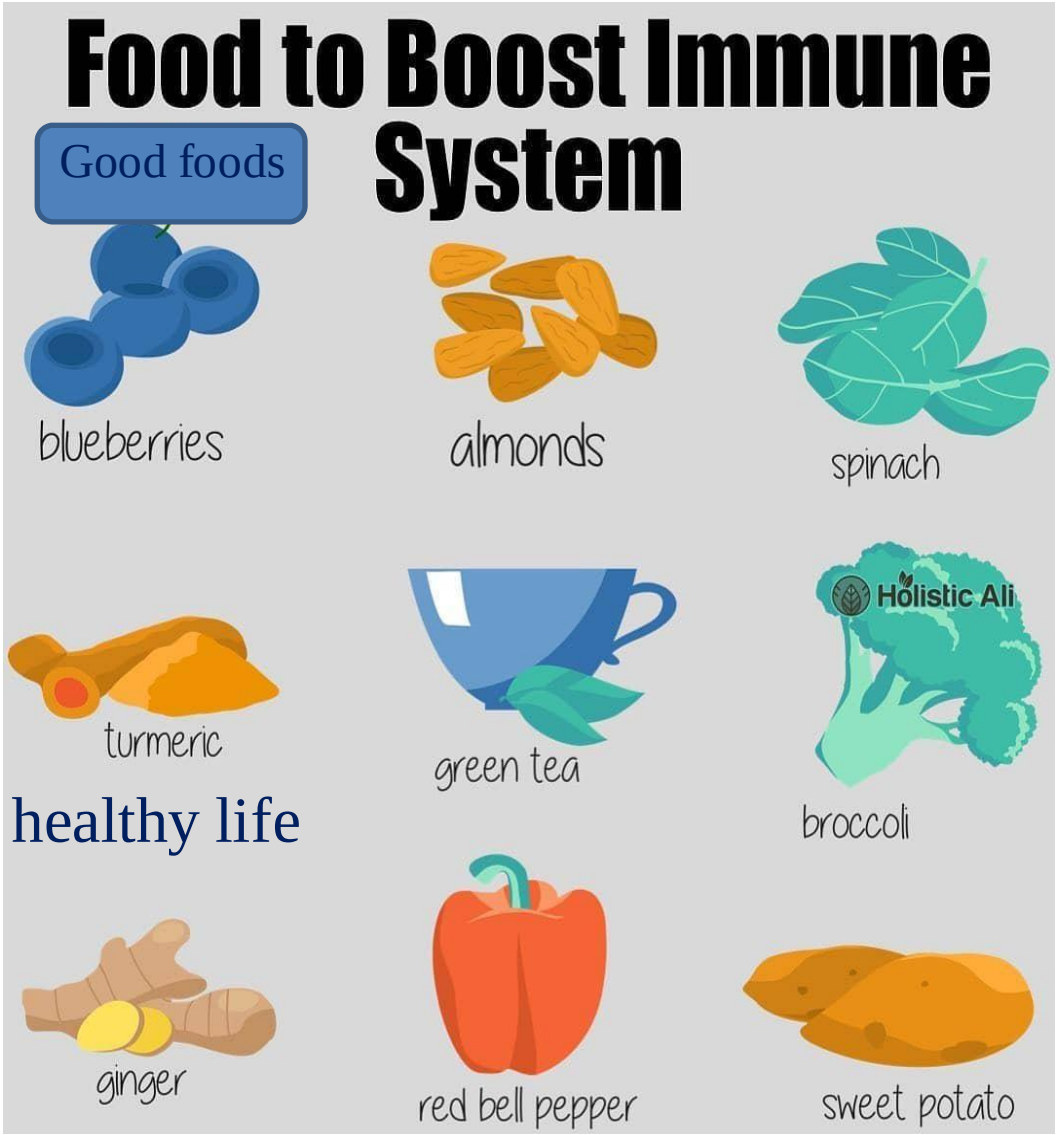
These spices have anti-inflammatory properties

Drink Lots Of Water

Water helps to flush toxins out and cool your body

Maintain A Healthy Gut By Adding Probiotics In Diet

Yogurt, Miso and Kombucha are rich in probiotics



Happy life healthy life

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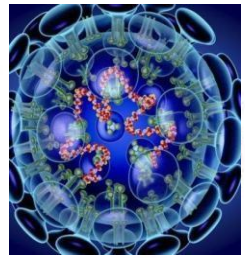
COVID-19 (the disease caused by the novel coronavirus)



What you can do

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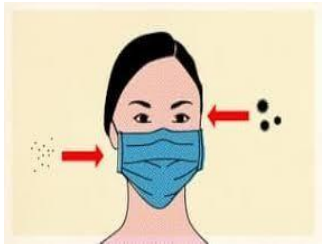


Healthy life style

1. Drink Water. It's what you're made of!

6. Eat your fruits.

2. Do your exercise!

7. Eat your vegetables.

3. Breathe fresh air.

8. Eat Whole Grains.

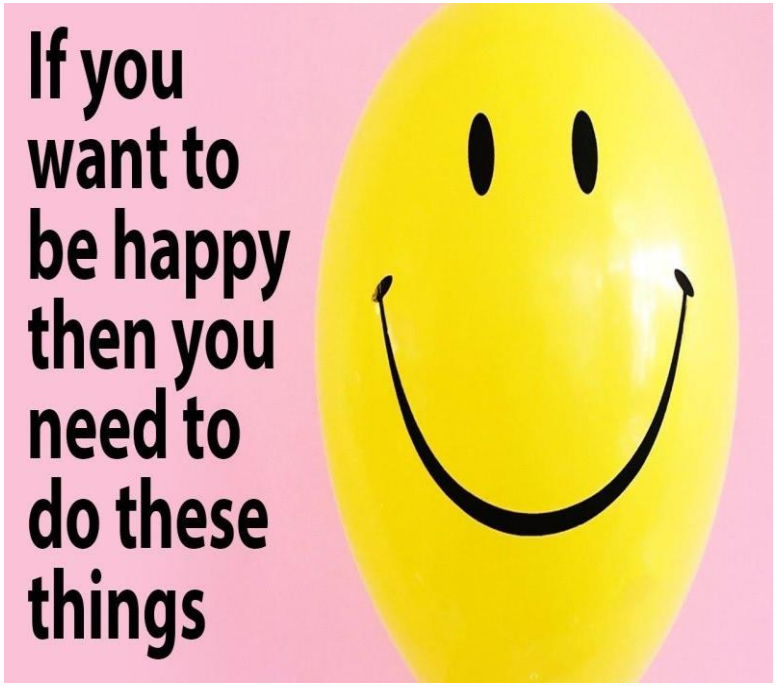
4. Go outside when the sun is out.

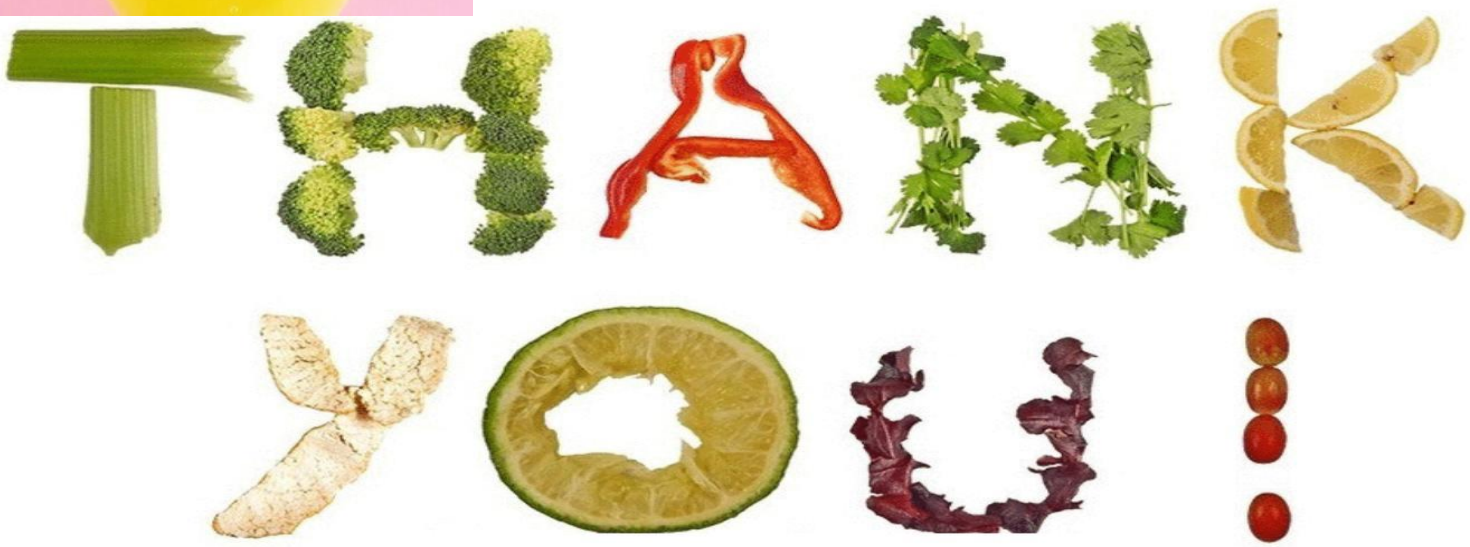
9. White if you choose meat.

5. Learn to relax.

10. Get to bed on time.

Dr.R.Hemalatha, HOD, Department of Chemistry, KCSAMW.





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