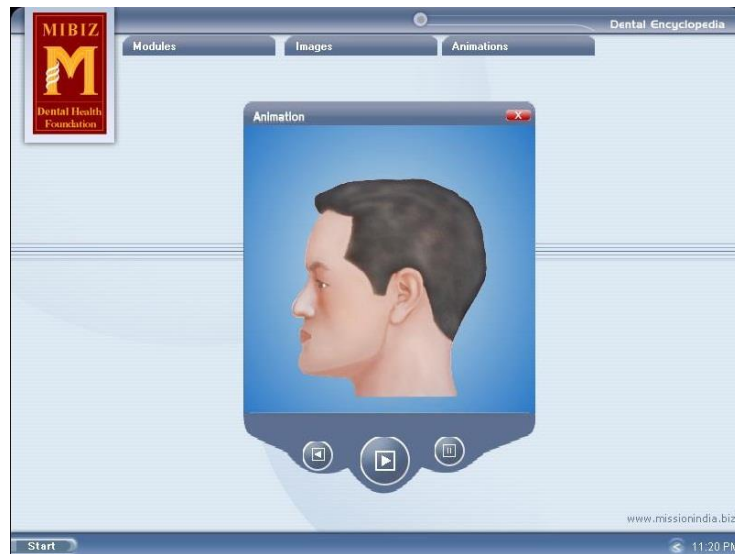
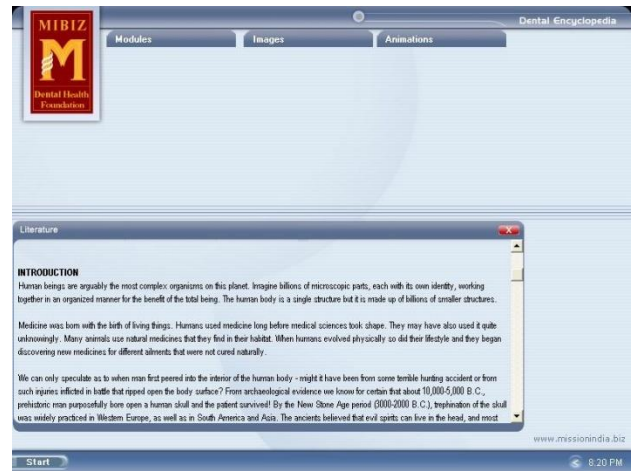
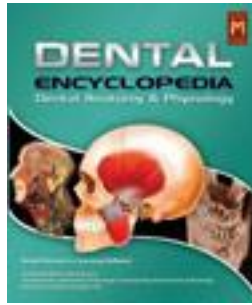
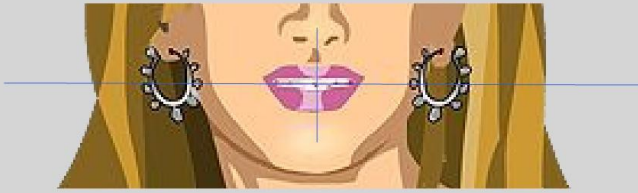


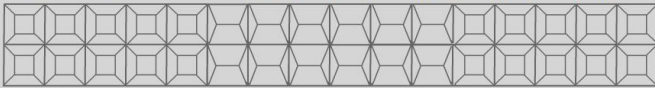
# DENTAL ANATOMY & PHYSIOLOGY



## Dental:Charting

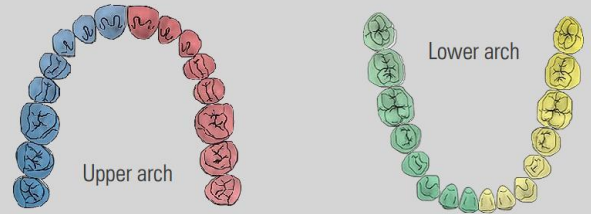


The chart is orientated as if we were looking directly at the patient

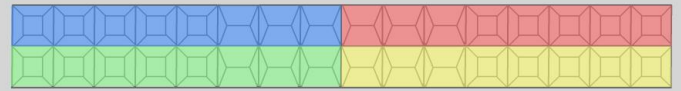


Standard Dental Chart

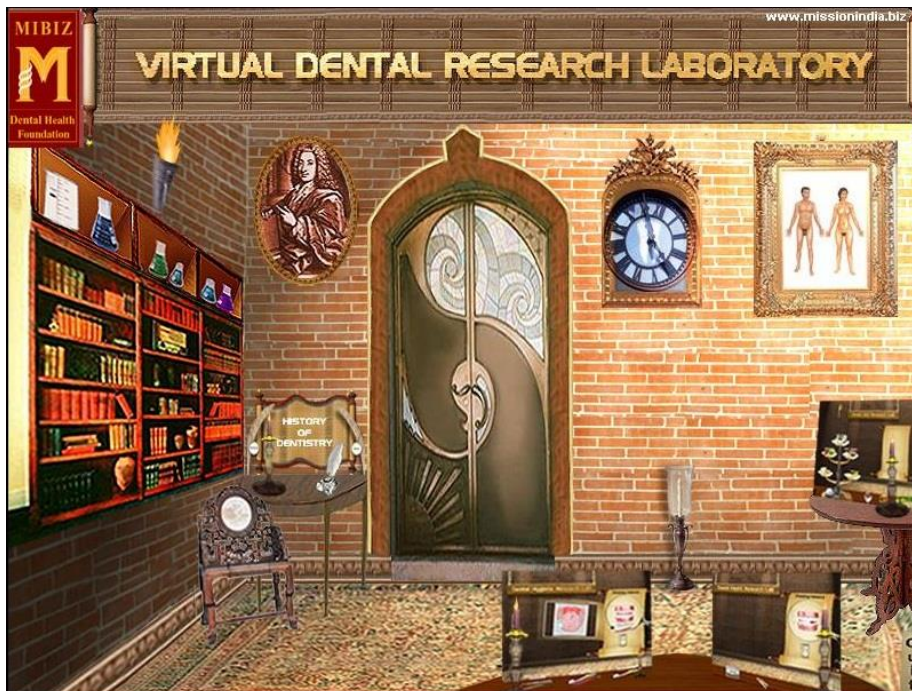
## Dental:Charting



For the purposes of charting, the mouth is divided into 4 quadrants.



Standard Dental Chart



## DENTAL ANATOMY & PHYSIOLOGY

### Unique Features

300000 Interactive Links  
50000 Line of Articles  
Over 85000 Frames of 2D Animation  
Over 15000 Frames of 3D Animation  
2D Dental Application Slide Animations 50  
Over 30000 Titles  
Over 10000 Frames of descriptive Animation  
Several Illustrations  
Images with Interactive title graphics with voice over  
Interactive Dental Cartoon - "VIRTUAL DENTAL RESEARCH LABORATORY"  
2D Dental Cartoon - "TOMS VISIT TO DENTAL KATE"

## DENTAL ANATOMY & PHYSIOLOGY

### INTRODUCTION

Skin, Hair & Nail, Musculoskeletal System, Cardiovascular System, Blood, and the lymphatic, and immune system, Respiratory System, Nervous System, The Dental Anatomy, Digestive System, Hormones& metabolism, Urinary System, Reproductive System, Sex, Pregnancy, and Childbirth

### Skin, Hair & Nail

Skin, Organ, Physical barrier, Temperature control, Skin color, Wrinkles, Skin Anatomy, Epidermis, Dermis, Subcutaneous Tissue Healing & Repair- SKIN, Closed-wound healing, Open wounds, Surfaces and adhesions, How aging affects your skin What is a skin biopsy?, Skin Biopsy- Risks, Maintaining a healthy lifestyle , Bathing: Avoid drying out, The Biology of Hair Hair Origin, Hair Anatomy, Hair Growth Cycle, Hair Shape, Baldness, Gray hair: What causes it? , Hair transplant, Hair Transplant – History, parts of the nail, Nail Anatomy, How your skin, hair and nails affect your healthWhat Can Go Wrong With the Skin, Hair, and Nails?, Other Skin Problems

### Musculoskeletal system

The body's skeleton, How the body moves, Flexibility of the spine, The joints, The backbone, Skeleton - skullCranium, Facial bones, Skeleton - shape and structure, Bone structure, Bone shapes, Skeleton - bone growth Broken bones fractures, Realignment, Repair, The bone healing, Skeleton - arm and shoulder, Skeleton - hands and feet Fingers and toes, Metacarpals and metatarsals, Wrist bones, Carrying weight, Arches, Skeleton - ribcage Skeleton – spine, Column of ring-like bones, Vertebrae, Skeleton – pelvis, Skeleton – leg, Skeleton - joints Skeleton – teeth, The body's muscle, Skeletal muscle, Smooth muscle, Cardiac muscle, Pulling muscles Muscles - structure and contraction, Exercise, Endurance exercise, Bodybuilding, Endurance and resistance combined Energy is directed to your muscles during exercise, Endurance or speed, Slow twitch and fast twitch muscle fibers make energy in different ways, Muscles – tone, Firm muscles, Flaccid muscles, Muscles – facial, Expressive muscles, Bone disorders Joint and ligament disorders, joint replacement, Bunion surgery, Muscle and tendon disorders , Musculoskeletal injuries

### Cardiovascular System

Cardiovascular system, Structure of the heart, Heart and blood vessel basics, What do blood vessels do? Types of blood vessels, Arteries, Capillaries, Veins, The largest blood vessels, The aorta The blood circulation, How the heart beats, The heart cycle, Heart valves, Heart sounds, Heart, front view Heart valves - anterior view, heart valves - superior view, overview & description, What is blood pressure? Blood vessels in your heart, Coronary arteries that are commonly blocked, Coronary veins, Heart valve surgery Heart valve replacement, Aortic valve replacement, Blood cholesterol, Coronary heart disease What can be done to prevent the disease?, How is the disease diagnosed?, Heart transplant Risks for any anesthesia are:, Risks for any surgery are: ,

Expectations after surgery ECG (electrocardiogram), Exercise and the heart, Developmental anatomy of the heart

### **Blood, and the lymphatic, and immune system**

Blood, and the lymphatic, and immune system, Human body's defense mechanism, Physical characteristics of blood Formation of blood cells, Organs – spleen, components of blood, white blood cells, plasma, red blood cells Platelets, formed elements, functions of blood, transportation, regulation, protection, rbc life cycle production of rbc, leukocytes (white blood cells), hemostasis, vascular spasm, platelet plug formation clotting (coagulation), the lymphatic system, the body's defenses, physical and chemical barriers blood groups and blood types, abo blood group, rh blood group, blood transfusion bone marrow aspiration and biopsy, bone marrow transplant, Blood disorders, Disorders of the lymphatic system, Immune disorders

### **THE RESPIRATORY SYSTEM**

Breathing in and out (Respiratory processes), Network of airways, voice production, Sound machine Guardian of the airways, The voice box, Croaking and warbling, the respiratory structure structures of the respiratory system, sinuses, breathing and respiration, breathing works how breathing is regulated, exchanging gases in the body, voice production (speech) the cough reflex, modified respiratory movements, pulmonary volumes and capacities Respiratory system, a flash, nose and throat disorders, steam inhalation, endoscopy of the nose and throat mirror laryngoscopy, lung disorders, asthma, monitoring your asthma, bronchitis, pneumonia Tuberculosis (tb), pulmonary embolism, pulmonary edema, cystic fibrosis, severe acute respiratory syndrome (sars) Chest tube, bronchoscopy

### **THE NERVOUS SYSTEM**

The structure of the nervous system, Neurophysiology, nervous system, brain, spinal cord, and nerves protection and coverings, blood supply, cerebrum, right hemisphere, left hemisphere, cerebral cortex frontal lobe, motor cortex, sensory cortex, parietal lobe, occipital lobe, temporal lobe, cerebellum limbic system, olfactory bulbs, amygdala, hippocampus, fornix, hypothalamus, pituitary gland pineal gland, Thalamus, Corpus Callosum, brain stem, cranial nerves, the spinal cord and spinal nerves protection and coverings, meninges, reflexes, spinal cord, spinal nerves, nerve cells, neurons neuron structure, neurotransmitters work, sensations, sensory receptors, touch the special senses, olfactory sensations: smell, anatomy of olfactory receptors, olfactory receptors gustatory sensations: taste, protecting your body, taste bud structure, tastes and flavors proprioceptors, voluntary and involuntary responses, voluntary responses, autonomic responses the brain theory, processing higher functions, brain function, pain relief using tens, eeg carotid doppler scanning, cerebral angiography, lumbar puncture, subdural hemorrhage visual sensations, forming an image, light-sensitive retina, grey vision and movement color vision, secrets of your lens, the tears, structure of the eye, how the eye works accommodation and the near point of vision, action of the pupil, visual pathways rods and cones, cataract surgery, slit-lamp examination, applanation tonometry, ophthalmoscopy ears, hearing and balance, sound waves, balance and movement, connecting passageways components of the ear, the mechanism of hearing, your body's microphone, physiology of hearing the sense of balance, physiology of equilibrium, the role of hair cells, linear movement and static position rotational movement, otoscopy, stapedotomy, hearing aids, protecting your hearing, cochlear implants

### **THE DENTAL ANATOMY**

Tooth, The dawn of dentistry, Common Misconceptions, Disorders of the teeth, The Importance of Oral Hygiene, The Human teeth, Section of a human molar, The structure of the teeth, The role of the Gums, Development of teeth, Types of tissue in teeth In Humans, When does the first tooth develop? The mouth and tooth, Basic Anatomy of the Mouth and Teeth Normal Development of the Mouth and Teeth, What Do the Mouth and Teeth Do? Mouth, Mouths of animals, The Human mouth, Cavum Oris; Oral or Buccal Cavity The Vestibule, The Mouth Cavity Proper, The Lips, The Labial Glands, The Cheeks, The Gums, The Palate, The Hard Palate, The Soft Palate

The Teeth (*dentes*), Development of baby teeth, Development of permanent teeth, Deciduous Teeth (Baby Teeth), Permanent Teeth, Upper Teeth Lower Teeth, Upper Teeth Lower Teeth, The Permanent Teeth, The Deciduous Teeth, Structure of the Teeth, The dentin, The dental canaliculi, The matrix, The enamel, The crista petrosa or cement, Development of the Teeth, Development of the Deciduous Teeth, Formation of the Dentin, dentinal fibers, Formation of the Cement, Formation of the Alveoli, Development of the Permanent Teeth, Eruption of the Teeth

The Tongue (*lingua*), Its Root, Its Apex, Its Inferior Surface, The Papillæ of the Tongue, The papillæ vallatæ, The papillæ fungiformes, The papillæ filiformes, The papillæ simplices, The Muscles of the Tongue, The extrinsic muscles, The Hyoglossus, The Chondroglossus, The Styloglossus, The intrinsic muscles, The Longitudinalis linguæ superior, The Longitudinalis linguæ inferior, The Transversus linguæ, The Verticalis linguæ, Nerves, Structure of the Tongue, The mucous membrane, The corium, Structure of the Papillæ, Glands of the Tongue, The serous glands, The septum, The hyoglossal membrane, Taste-buds, Vessels and Nerves, The sensory nerves of the tongue

The Salivary Glands, Parotid Gland, The anterior surface, The posterior surface, The superficial surface, The deep surface, Structures within the Gland, The parotid duct, Vessels and Nerves, Submaxillary Gland, Sublingual Gland, Structure of the Salivary Glands The Mandible (Lower Jaw), (Inferior Maxillary Bone), The Body, The Ramus, The Coronoid Process, The Condylod Process, Ossification, Articulations, Changes Produced in the Mandible by Age

The Maxillæ (Upper Jaw), The Body, The infratemporal surface, The orbital surface, The nasal surface, The Maxillary Sinus or Antrum of Highmore, The Zygomatic Process, The Frontal Process, The Alveolar Process, The Palatine Process, Ossification, Articulations, Changes Produced in the Maxilla by Age

Types of tissue in the teeth, Tooth enamel, Structure, Development, Destruction, Oral hygiene and fluoride, Effects of dental procedures, Dental restorations, Acid-etching techniques, Tooth whitening, Systemic conditions affecting enamel, Dentin, Pulp (tooth), Cementum, Oral pathology

The structure of the teeth, The role of the gums, development of teeth, Types of tissue in teeth in humans Teeth and gums, Using the jaws, The dawn of dentistry, Common misconceptions, disorders of the teeth the importance of oral hygiene, Toothache, What causes toothache? , How can toothache be avoided? What should i do if i have toothache? , Caring for your teeth and gums, Brushing your teeth Cleaning between teeth, Tooth filling, Root canal treatment, Orthodontic treatment, Crowns and replacement teeth Replacement teeth, The development of toothpaste throughout history, The development of toothbrush throughout history

### **DIGESTIVE SYSTEM**

Absorption, Regulating digestion, hunger and appetite, Stimulating hunger and appetite, Overview of digestive process The digestive tract, Mouth, Tongue, Salivary glands, Teeth, Mechanical digestion – swallowing, Chemical digestion Esophagus and stomach, Small and large intestines, Absorption and feces formation in the large intestine, Peristalsis Liver, gallbladder, and pancreas, liver functions, Regulation of gastric emptying, Digestive enzymes, Preventing constipation Barium swallow, Upper digestive tract endoscopy, Liver biopsy, Liver transplant, Ercp, Colonoscopy, colectomy, Colostomy banding hemorrhoids, Aging and the digestive system, Developmental anatomy of the digestive system

### **THE HORMONES AND METABOLISM**

Endocrinologist, feedback mechanism, the endocrine system, Hormone-secreting glands and cells, Pituitary and pineal glands thyroid stimulating hormone (tsh), Pineal gland, Thyroid, parathyroid, the structure of thyroid and parathyroid glands. Adrenal glands, Pancreas, Structure of the pancreas, Metabolism, Anabolism and catabolism, other endocrine glands How the body uses food, endocrine diseases and disorders, Needle aspiration of the thyroid gland, Insulin Monitoring your blood glucose

### **THE URINARY SYSTEM**

Blood filtration, hormone production, The sexual difference, Urinary system, Kidneys, Balancing your blood, Regulating blood pressure, When kidneys go wrong, Urine formation and excretion, Urine formation, Water

reabsorption, What is urine made of Intravenous urography, problems in the urinary system, Why do kidneys fail?, Kidney stones, Kidney biopsy, Dialysis Peritoneal dialysis, hemodialysis, Kidney transplant, urodynamic studies, Bladder catheterization, Cystoscopy

### **The Reproductive System**

Reproduction, Sexual reproductive systems, Asexual reproduction, Sexual reproduction

**Male reproductive system**, Male structure, Testes produce sperm and male sex hormones, The penis and erections, Sperm production Semen and ejaculation, Male hormones, puberty, physical development, Disorders of the testes, scrotum, and penis Epididymal cyst, Torsion of the testis, Examining your testes, hydrocele, vasectomy, Circumcision, Prostate gland biopsy Radical prostatectomy

**Female reproductive system**, eggs, ovaries and sex hormones, Female structure, Female fertility, Female hormones Puberty, Female reproductive system, Menstrual cycle, Changes during menopause, Role of the breasts Breast self-examination, aspiration of a breast lump, Breast reduction, Endometrial sampling, Laproscopy tubal ligation, hysteroscopy, Hysterectomy, Pap test, Colposcopy, mammography, Surgery of the breast cancer

### **Sex, Pregnancy, and Childbirth**

Sex and reproduction, Human sexuality, fertility, Sexual intercourse, Fertilization, Sperm journey  
Sexual problems, Sex therapy, Infertility, Pregnancy and childbirth, multiple pregnancies  
Pregnancy & childbirth week 1- week 40

### **Toms visit to Dentist Kate (Cartoon)**

#### **VIRTUAL DENTAL RESEARCH LABORATORY (Interactive Dental Cartoon)**

**Human Life Cycle** – Male, Female (How they grow and age) **Dental Time mapping**, - A Century back  
Dentists office, A modern Dentists office

**The History of Dentistry** - he History of dentistry highlights in chronological sequence: The Ancient Origins, The Middle Ages- Renaissance, The 18th Century - The Development of a Profession, The 19th Century - Advances in Science & Education, The 20th Century - Innovations in Techniques & Technology.

**The Tooth story**: The human tooth development.

**Dental Health Research Lab**: Cigarettes, Chewing Tobacco.

**Dental Diet Research Lab**

**Dental Hygiene Research Lab**



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