Bones and Joints Vocabulary

 Bone any of the pieces of hard, whitish tissue making up the skeleton in humans and other vertebrates.  
Joint a structure in the human or animal body at which two parts of the skeleton are fitted together.  
Bone Marrow a soft fatty substance in the cavities of bones, in which blood cells are produced (often taken as typifying strength and vitality).  
Ligament a short band of tough, flexible, fibrous connective tissue that connects two bones or cartilages or holds together a joint.  
Vertebrates an animal of a large group distinguished by the possession of a backbone or spinal column, including mammals, birds, reptiles, amphibians, and fishes.  
Tendon a flexible but inelastic cord of strong fibrous collagen tissue attaching a muscle to a bone.  
Collagen the main structural protein found in skin and other connective tissues, widely used in purified form for cosmetic surgical treatments.  
Cartilage firm, whitish, flexible connective tissue found in various forms in the larynx and respiratory tract, in structures such as the external ear, and in the articulating surfaces of joints. It is more widespread in the infant skeleton, being replaced by bone during growth.  
Synovial Joint joins bones with a fibrous joint capsule that is continuous with the periosteum of the joined bones, constitutes the outer boundary of a synovialcavity, and surrounds the bones' articulating surfaces

Ball and Socket Joint a natural or manufactured joint or coupling, such as the hip joint, in which a partially spherical end lies in a socket, allowing multidirectional movement and rotation.

Ellipsoid Joint an ovoid articular surface, or condyle that is received into an elliptical cavity. This permits movement in two planes, allowing flexion, extension, adduction, abduction, and circumduction.

Hinge Joint bone joint in which the articular surfaces are molded to each other in such a manner as to permit motion only in one plane.

Gliding Joint also known as a plane joint or planar joint, is a common type of synovial joint formed between bones that meet at flat or nearly flat articular surfaces. Gliding joints allow the bones to glide past one another in any direction along the plane of the joint – up and down, left and right, and diagonally.

Pivot Joint a type of synovial joint. In pivot joints, the axis of a convex articular surface is parallel with the longitudinal axis of the bone.

Invertebrate an animal lacking a backbone, such as an arthropod, mollusk, annelid, coelenterate, etc. The invertebrates constitute an artificial division of the animal kingdom, comprising 95 percent of animal species and about 30 different phyla.

Axial Skeleton the part of the skeleton that consists of thebones of the head and trunk of a vertebrate. In the humanskeleton, it consists of 80 bones and is composed of six parts; the skull bones, the ossicles of the middle ear, the hyoid bone, the rib cage, sternum and the vertebral column.

Appendicular Skeleton the portion of the skeleton of vertebrates consisting of the bones or cartilage that support the appendages. Appendages appeared as fins in early fish, and subsequently evolved into the limbs of tetrapods.

Spongy Bone bone in which the spicules form a latticework, with interstices filled with embryonic connective tissue or bone marrow. Also called cancellous bone, spongy substance , trabecular bone .

Epiphyseal line the line of junction of the epiphysis and diaphysis of a long bone where growth in length occurs.

Medullary Cavity the central cavityof bone shafts where red bone marrow and/or yellow bone marrow (adipose tissue) is stored; hence, the medullary cavity is also known as the marrow cavity.

Periosteum a dense layer of vascular connective tissue enveloping the bones except at the surfaces of the joints.

Nutrient Foramen all bones possess larger or smaller foramina (openings) for the entrance of the nourishing blood-vessels; these are known as the nutrient foramina, and are particularly large in the shafts of the larger long bones, where they lead into a nutrient canal, which extends into the medullary cavity.

Endosteum a thin vascular membrane of connective tissue that lines the inner surface of the bony tissue that forms the medullary cavity of long bones.

Nutrient Vessel usually accompanied by one or two veins, sends branches upward and downward to the bone marrow, which ramify in the medullary membrane, and give twigs to the adjoining canals.

Arthritis painful inflammation and stiffness of the joints.

Osteoporosis a medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of calcium or vitamin D.

Leukemia a malignant progressive disease in which the bone marrow and other blood-forming organs produce increased numbers of immature or abnormal leukocytes. These suppress the production of normal blood cells, leading to anemia and other symptoms.