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The bones of the human skull are joined together by sutures.

The bones of the encephalic skull (the roof and base of the skull) enclose and protect the human brain. They consist of frontal bone, temporal bone, parietal bone, occipital bone, ethmoid bone and sphenoid bone.

The bones of the facial skull form the base for the face, setting the eye sockets, the nasal fossa and the buccal cavity: frontal bone, lacrimal bone, nasal bone, zygomatic bone, maxilla (upper maxilla), mandible (lower maxilla), premaxilla bone, palatine bone, vomer bone, ethmoid bone.



QS 8/11

Artificial Demonstration Skull of an Adult

Natural cast, made of SOMSO-Plast®.

With representation of the blood vessels and nerves (N. trigeminus and N. opticus etc.). Designed to be separated into 10 parts as follows: 1. Cranium with coloured vessels and blood supply of the hard meninx, 2. Base of the skull, sectioned through median line into two halves, 3. Nasal septum detachable. The paranasal sinuses and turbinate bones are shown, 4. The frontal sinus can be opened, 5. The maxillary sinus can be opened, 6. The right temporal bone can be taken out and opened. Representation of the bony labyrinths, the semicircular canals, the eardrum and the chain of auditory ossicles. A radial mastoidectomy is shown on the left temporal bone. 7. Detachable lower jaw and roots of the teeth are exposed (flap). Complete set of teeth.

In the new-born and infants, soft spots (fontanelles) still exist between the encephalic skull bones, which close over in the course of the first years of life. These cranial sutures can still be well recognised in the adult.



QS 3/2

Artificial Skull of Child (About 6 Years Old)

Natural cast, made in SOMSO-Plast®. Lower jaw movable. Upper and lower jaw are open to show the emergent second dentition. Altogether 2 parts.



QS 3

Artificial Skull of a Fetus

Modeled according to nature, made in SOMSO-Plast®. Upper and lower jaw are open. Altogether in 2 parts.

The main differences between the skull of man and anthropoids have their origin in their different body postures and way of walking. Due to man walking upright, his cervical musculature is not so strong and the walls of the skull bones have become thinner. The facial cranium and the mandible have retracted somewhat but, on the other hand, the encephalic skull zone has extended due to the increase in brain size.

Homo denominates a genus of the Hominini tribes, which includes modern man and his closest fossil relatives. The skull of the genus Homo developed during anthropogenesis (human evolution) the following characteristics: increased brain size leading to a large increase in the encephalic skull, increased verticality of the forehead, reduction of the jaw muscles and of the teeth leading to the reduction of the size of the buccal cavity and maxillae, formation of the chin.





S 1 - Reconstruction of a Skull of Paranthropus Boisei

Site and date of finding: Olduvai Gorge (Tanzania, East Africa), 1959. Stratum of finding: bottom bed I Olduvai. Age: Lower pleistocene, approx. 1.7 million years. The lower jaw was reconstructed after an original finding near Peninj (Tanzania, near Natron Lake) in 1964: estimated age approx. 1.7 million years. The model separates into 2 parts.



S 2 - Reconstruction of a Skull of Homo Erectus

Site and date of finding: Sangiran (Central Java), 1936 and 1939. Stratum of finding: Djetis formation. Age: lower pleistocene, less than 1.9 million years. Model separates into 2 parts.



S 3 - Reconstruction of a Skull of Homo Sapiens Neanderthalensis

Site and date of finding: La Chapelle aux Saints (Dordogne France), 1908. Age: middle Upper Pleistocene (Wuerm glacial), approx. 40,000 - 70,000 years old. The upper dental arcade and the lower jaw have been reconstructed and adapted after the original find in Le Moustier (Dordogne, France) in the year 1908. The estimated age of this find is also 40,000 - 70,000 years. Model separates into 2 parts.



S 3/1 - Reconstruction of the Skull of Homo habilis (O.H. 24)

Site and date of finding: Olduvai Gorge, region DK 1, east, 1968. Age: approx. 1.85 million years, Pliocene.



S 4 - Reconstruction of the Skull of Homo Sapiens

As an example of the Cromagnon man we have taken a skull from the series of findings from Predmost (Czechoslovakia). Site and date of finding: Predmost (North Moravia), 1884 - 1928. Age: Top upper pleistocene, approx. 25.000 years: Separates into 2 parts.



S 5 - Reconstruction of a Skull of *Australopithecus africanus*
 Site and date of finding: Sterkfontein (Transvaal, South-Africa), 1947. Stratum of finding: "member 4" (formerly: lower breccia). Age: lower pliocene, approx. 2.5 - 3.0 mill. years. Set of teeth and lower jaw have been reconstructed with the aid of other original finds of "member 4" of Sterkfontein. Model separates into 2 parts.



S 5/1 - Reconstruction of the Skull of *Proconsul africanus*
 Site and date of finding: Rusinga Island, Kenya, East-Africa, 1948. Age: approx. 20 million years (early Miocene).



S 7 - Reconstruction of *A. afarensis*
 Fossil sites of *Australopithecus afarensis*:
 Belohdelie, Fejej, Hadar (Denen Dora-Sidi Hakoma- and Kada Hadar-Member), Maka and Omo (Shungura and Usno Formation), Ethiopia, Laetoli (Lower and Upper Laetoli Beds), Tanzania
 Age of skull: 3.6 - 3.0 million years, Upper Pliocene
 Model is detachable in 2 parts.



S 11 - The Steinheim Skull, *homo steinheimensis*
 Site and date of finding: Steinheim an der Murr, north of Stuttgart, 1933.
 Age: Middle-Pleistocene, Mindel-Riss or Holstein Interglacial Period, approx. 250.000 years.



S 2/3733 - Reconstruction of the Skull of *Homo ergaster* (KNM-ER 3733)
 Site and date of finding: Koobi Fora, East Turkana Region, Kenya, East-Africa, 1975. Age: Upper Pliocene, approx. 1.8 million years.

As the cranial cavity of anthropoids (man, orang-utans, gorillas and chimpanzees) contains a relatively large brain, their skulls are correspondingly large in comparison with those of other primates. Anthropoids have 32 teeth as in man but do not develop "wisdom teeth". The setting of the teeth and jaw depends on diet. For instance, in man, both sexes have formed equally small canine teeth and without a tusk form. In other classes of anthropoids, male teeth are distinctly larger than those of the female. In man, the diastema (the gap between the incisors and the canines) is also missing. Apart from that, the dental arch (lower dental arch or upper dental arch) in man has the form of a parabola, while in the rest of the anthropoids, it has the form of a U.



ZoS 53/107 - Artificial Skull of a Chimpanzee male, natural cast, made in SOMSO-Plast®. Removable base and lower jaw.



ZoS 51 - Skull of Gorilla

Gorilla g. gorilla (Savage a. Wyman 1847), female, natural cast, made in SOMSO-Plast®. Lower jaw movable, and can be removed.



ZoS 52/1 - Skull of Orang-Utan

Pongo p. pygmaeus abeli (Clark 1826), female, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 52/2 - Skull of Young Orang-Utan

Pongo p. pygmaeus, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53 - Skull of Chimpanzee

Pan tr. troglodytes (Blumenbach 1799), male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53/3 - Skull of Baboon

Papio doguera, male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53/4 - Skull of a Rhesus-Ape
 Macaca mulatta, male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53/6 - Skull of a Howling Monkey
 Alouatta belzebul (Linnaeus, 1766) male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53/7 - Skull of a Gibbon
 Hylobates syndactylus (Raffles, 1821), male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.



ZoS 53/20 - Beaver Skull
 Castor fibre (LINNE, 1785). Natural casting in SOMSO-Plast®. Movable and removable mandible.



ZoS 53/5 - Tupaia-Skull
 Tupaia glis (Diard, 1820), male, natural cast, made in SOMSO-Plast®. Lower jaw movable and can be removed.

SOMSO skull models are suitable as a teaching means in the study of medicine, biology, zoology, paleoanthropology, evolutionary biology and anthropology, and for training and explanation to patients in surgery, chiropractics, orthopaedics, bone surgery, prostheses, craniometry, plastic surgery, craniosacral therapy, cranial acupuncture and osteopathy.



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Our models are produced in our workshops in Coburg. Trueness to detail and a high degree of aesthetics are features of every model conform with our philosophy to make models taking nature as our example.



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