

**THE BRAIN FROM TOP TO BOTTOM** The human brain as we know it today is like a city with a long history. Lastly, the neo-cortex began its spectacular expansion in primates, scarcely 2 or 3 million years ago, as the genus Homo emerged.

**History Module: The Expansion of the Hominid Brain**

**Lien : The ages of the Earth**

**THE EVOLUTIONARY LAYERS OF THE HUMAN BRAIN** The first time you observe the anatomy of the human brain, its many folds and overlapping structures can seem very confusing, and you may wonder what they all mean. But just like the anatomy of any other organ or organism, the anatomy of the brain becomes much clearer and more meaningful when you examine it in light of the evolutionary processes that created it. Probably the best known model for understanding the structure of the brain in relation to its evolutionary history is the famous triune brain theory, which was developed by Paul MacLean and became very influential in the 1960s. The limbic brain is the seat of the value judgments that we make, often unconsciously, that exert such a strong influence on our behaviour. The neocortex first assumed importance in primates and culminated in the human brain with its two large cerebral hemispheres that play such a dominant role. Keeping this in mind, MacLean's original model distinguished three different brains that appeared successively during evolution : The reptilian brain, the oldest of the three, controls the body's vital functions such as heart rate, breathing, body temperature and balance. The reptilian brain is reliable but tends to be somewhat rigid and compulsive. The limbic brain emerged in the first mammals.