

Name: _____

THE REPTILIAN BRAIN

The *reptilian brain* was identified and named by Paul D. MacLean, an American physician and researcher. He developed a model called the *triune brain*. This model describes the brain as having three layered parts, each one related to a stage in the evolution of species.

The *reptilian brain* is the innermost layer of the brain.

Dr. MacLean theorized that it developed early in our evolutionary history, and we share it with birds and reptiles.

It generates instinctive survival behavior, such as the *fight-or-flight* response to danger.

It also controls *autonomic* functions—processes like breathing and heartbeat that go on without our consciously making them happen.

Wrapped around the *reptilian brain* are two *mammalian brain* layers.

1. The middle layer, the *limbic system*, is a structure we share with mammals such as dogs and cats.
2. The outermost layer, the *neocortex* (also called the *cerebral cortex*) is associated with higher-order mammals, such as primates and humans. It controls higher-order thinking skills, reason and speech.

The *reptilian brain* can override the more rational parts of the brain. This leads to behavior that is impulsive, irrational and unpredictable.

It is a constant challenge for human beings to use their rational brain—the *neocortex*—to monitor and control responses that originate in their *reptilian brain*.