



# Memory

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**M**emory, the ability to encode, store, and retrieve information, is important in our daily actions and long-term behaviour.

Memory is divided into two broad categories: 1) **short-term memory**, and 2) **long-term memory**. Short-term memory refers to the ability to hold information in mind for a short duration of time (approximately 15 to 30 seconds). An example of short-term memory would be holding on to a phone number you just heard as you dial it. **Working memory**, is a type of short-term memory, but is distinct in that it involves the manipulation of information. This type of memory is often referred to as **working *with* memory** because it involves storing information for short periods of time for processing, reasoning, and guiding behaviour. For example, if someone gave you a list of letters and asked you to say them back in alphabetical order, you would need working memory to do that.

Long-term memory is the ability to store memory for an indefinite period of time. Long-term memory is further sub-categorized into: 1) **implicit memory** (non-declarative - not part of conscious thought); and 2) **explicit memory** (declarative – involves conscious

recognition, recall or recognition). Implicit memory is memory obtained and used without conscious awareness. One of the most common forms of implicit memory is procedural memory. This memory type is acquired with repetition of a complex task (e.g., driving a car, riding a bike), and guides our performance without awareness. In other words, we just “know how” to ride a bike.

Explicit memory, in contrast, is “knowing what” happened. It involves intentional (conscious) recollection of experiences and knowledge. There are two forms of explicit memory: 1) **semantic memory** (knowledge of the general world, such as knowing that the capital of France is Paris); and 2) **episodic memory** (knowledge of personal experience in time and space, such as remembering the day you went to the movies with your mom on her 42<sup>nd</sup> birthday).

Different forms of memory are mediated by different regions of the brain. The chart on the next page outlines the different types of memory and the brain regions associated with them.

