

## The Science of the Mind - Chapter 1

At a minimum, after completing this topic, you should be able to:

### 1. Define Cognitive Psychology and list the cognitive processes included

Cognition is the collection of mental activities used in perceiving, remembering, and thinking, as well as the act of using those processes.

COGNITIVE PSYCHOLOGY is the scientific study of these mental processes.

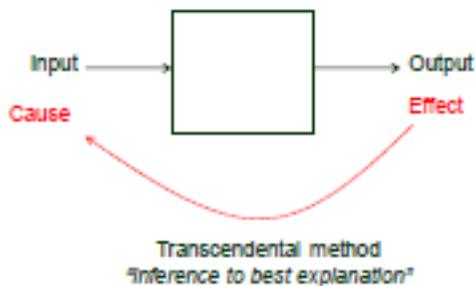
Cognitive processes include:

**Perception, attention, memory, concepts, language, visual knowledge, judgements/decisions, reasoning/problem solving.**

### 2. Explain the advantages and disadvantages of introspection and behaviourism

	Advantages	Disadvantages
Introspection	<ul style="list-style-type: none"><li>The study of conscious experiences</li></ul>	<ul style="list-style-type: none"><li>Can only study the conscious mind (thoughts) - limited tool</li><li>Testability of claims are often unattainable</li></ul>
Behaviourism	<ul style="list-style-type: none"><li>Objective data</li><li>Measurable, recordable, physical events</li></ul>	<ul style="list-style-type: none"><li>Beliefs, wishes, goals and expectations cannot be objectively recorded</li></ul>

### 3. Describe Kant's Transcendental Method



Begin with observable facts and then work backwards.

Ask: How could these observations have come about? What must be the underlying *causes* be that lead to these *effects*?

Sometimes called the “inference to best explanation” method, is the heart of most modern science.

### 4. Describe the working memory system and its components

Working memory holds information in an easily accessible form, so that the information is available instantly when you need it. This instant availability is promoted by several factors, instantly available when you need it. This instant availability is promoted by several factors including *size*: Working memory is hypothesised to have a small capacity and so, with only a few items held in this store, you will never have a problem locating just the item you want. Can test working memory with a **span test**.

### 5. Explain how span tasks tell us about the capacity of working memory and how the errors that we make tell us about its nature

Span tasks shows people start making errors with 7-8 letters, thus capacity is 7-8.

Errors are usually similar sounds like S and F, B and V, thus working memory must have some sound based component.

### 6. Discuss how a concurrent articulation task affects working memory capacity, sound-alike errors, and memory span for complex visual shapes.

The concurrent articulation task requires the brain to utilise the mechanisms for speech production to say “Tah Tah Tah” outloud continuously. Therefore, the mechanisms required (speech production) for saying 1, 4, 6, 4, 9 in your head (inner speech; subvocalization) are unavailable due to the words being spoken. Words outloud and subvocalization cannot happen simultaneously