



**University Learning in Schools**

# **Psychology**

**Myth-busting the Brain:  
Teacher Answer Key**

## **Lesson 2**



## Teacher Answer Key

### General Brain pack:

#### All items are myths.

- **Brain size** – the quality of the connections between brain cells is more important than the size of the brain overall.
- **Sides of the brain** – definitely not the case that a stronger hemisphere dictates personality. Although the brain is made up of two distinct sides, they are heavily interconnected via the corpus callosum. The hemispheres therefore cannot and do not operate in isolation. Although some tasks' functions may dominate in a particular side, all cognitive functions require interaction of the left and right hemisphere. Furthermore, the implication that personality traits follow similar hemisphere preferences has absolutely no scientific validation.
- **10% of brain** – if this were true, why would we have evolved to have brains of this size and with so many brain cells (neurons)?

### Phrenology pack:

#### Myths:

- **The Guardian piece** – sulci (gaps) and gyri (lumps) of brain do of course not spell people's names in Braille; this is an extract taken out of context from the newspaper.

### Occipital lobe pack:

#### Myths:

- Vision is one sense, with all visual information processed in the same way = myth.
- There are actually many different components of vision (e.g. lightness; sense of red, green and blue).

### Frontal lobe pack:

#### Myths:

- Lobotomy is still widely used in mental health treatment today. – Actually, lobotomy began to become less popular in the mid-1950s and is very rare today. No psychosurgery of any kind was performed in the UK between 1999 and 2009.

### Temporal lobe pack:

#### Myths:

- **God spot:** there is not one area of the brain associated with religious experiences. It is distributed in multiple regions across the brain. The God Spot helmet is, however, a real invention, but may stimulate multiple areas of the brain to generate the sensations.
- **Amygdala:** There is no part of the brain dedicated to maintaining gender roles. However, it has a very key role in emotional reactions, decision-making and memory.

### Parietal lobe pack:

#### Myths:

- **Einstein:** His enlarged parietal lobe isn't necessarily a cause or effect of his intelligence.
- **Mozart effect:** no real evidence for this.