

## Celebration of the brain: normal brain function

### Introduction

This activity asks students to think about the wide range of functions carried out by the human brain, as an introduction to the topic.

### The activity

Start students off by getting them to play a simple game, “paper, scissors and stone” ([how to play](#)) or to recall what they have done in the last hour and then to think about the different brain functions they used.

### Questions

1a) Make a list of all the functions you can think of which are carried out by your brain. If you wish, combine your list with that of one or more partners. Make a mind-map or spider diagram to illustrate your ideas. It may help to classify your (combined) list of brain functions under the headings:

- movement
- perception (senses)
- learning and memory
- mind

**Answers** might include:

*Movement. Control of movement, ranging from skilled movements of the fingers, such as writing, typing or playing a musical instrument, to movements of the whole body such as walking, running, doing sport. The brain also controls the movement of internal organs such as the heart, lungs and gut.*

*Learning and memory. These include learning skilled movements, as well as learning to speak, read and walk, learning academic subjects and learning about other people.*

*Perception. The five senses of vision, hearing, smell, taste and touch.*

*Mind. Imagination, thought, reasoning, planning, decision making, emotions, consciousness. These functions are sometimes considered activities of the ‘mind’ as distinct from the physical organ the brain though they are not possible without the brain. Philosophical ideas of whether distinctions can be made between mind and brain go beyond what is expected here. Students who are interested will find plenty to discuss.*

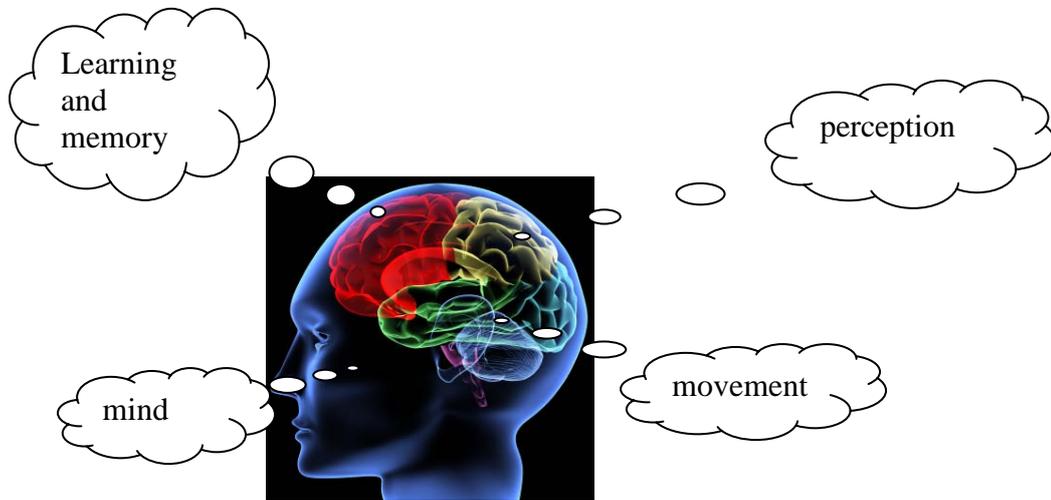
1b) Is it possible to identify all the functions of the brain just by thinking about them?

*Many functions of the brain are subconscious. We may not be directly aware of the brain’s control of internal organs or of the effects of hormones released by the brain controlling growth, development, metabolic rate etc.*

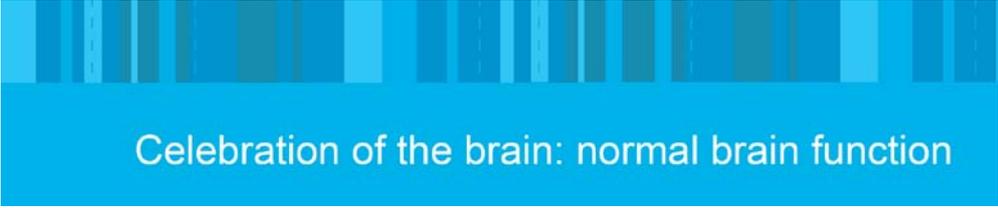
2. How does our mental ability change with age? Can we identify stages in our ability to learn different things such as physical skills, language or complex concepts?

*Infants are quick to pick up language skills as well as learning to talk, walk, feed themselves etc. Our ability to understand complex ideas increases as we develop. However, our intellectual abilities peak and then decline as we age, with different abilities peaking at different times.*

Some teachers have found this illustration helpful as a framework for the mind map



December 2010



## Celebration of the brain: normal brain function

### Introduction

This activity asks you to think about the wide range of functions carried out by the human brain, as an introduction to the topic of *cells, chemicals and the mind*.

### Questions

1a) Make a list of all the functions you can think of which are carried out by your brain. If you wish, combine your list with that of one or more partners. Make a mind-map or spider diagram to illustrate your ideas. It may help to classify your (combined) list of brain functions under the headings:

- movement
- perception (senses)
- learning and memory
- mind

1b) Is it possible to list all the functions of the brain just by thinking about them?

2. How does our mental ability change with age? Can we identify stages in our ability to learn different things such as physical skills, language or complex concepts?