

Mindz Brainplay

Fun Neuroscience
DET provider number 0100392629



Format, Costs and Session Outlines for Years 5-12 (as at January 1, 2018)

Recommended session times per group (depending on school timetables):

Years 5 and 6: 50-60-minute session (+ '**Mind Control**' session if desired)

Years 7-10: 60-75-minute session | **Years 11-12:** 75-90-minute session

Format:

Small or large group presentation depending on school needs. Mindz can present to a small group (<8) where every student will get a 'turn' or to larger group where several students show what is possible.

For all groups we need to connect to a large screen or data projector. For large areas, a sound system is needed. We can supply a data projector and sound system if necessary at no extra cost.

For years 7-12 we've found that groups of students are happy to watch 5-6 'demonstrators' show what is possible using the EEG headsets. A 60-90-minute session is usually fine.

For years 5/6 we've found that while we get 5-6 students to demonstrate, nearly **EVERY** student in a class wants to have the experience. We can provide an extra '**Mind Control**' session to give up to 20 additional students the chance to see their brain activity or practice mind control. See costs below.

Costs

We operate on a flat fee basis. We are flexible and will fit in with school needs. Regional schools booking for **outside our tour schedule** may pay an additional travel fee depending on location.

Single session (60-90 mins): Small/large group format: \$305 + gst

Half-day (3 hours): We can present **two** standard sessions: \$470 + gst

Full-day (6+ hours): We can present **four or five** standard sessions: \$790 + gst

Extra 'Mind Control' session: Where students who didn't get to demonstrate in our main session get to use the EEG to see their brain activity and use mind control. Allow 10 students per 30 minutes. Added to single session or half day bookings. 30 minutes \$100, 60 minutes \$180 + gst, 90 minutes \$250 + gst

Mindz post-visit activity packs: We always give teachers a page of definitions and follow-up activities. However, we can also provide basic EEG headsets with matching experiments at extra cost. Please discuss this with us before our visit. (basic pack with experiments: \$150).

Contact us at waschools@mindz.net.au or 1300 939 586

Session Outlines:

Years 5/6

Science / STEM

Time: 50-60 minutes **Group size:** Unlimited yet <30 preferred **Number of students actively involved:** 5
Extra time for whole class involvement available at extra cost (up to 25 students).

1. Introduction: What's in our head? Brain structure including different lobes and function
2. Structure of a neuron and brain waves introduced. **Brain Health** discussed
3. Demonstration of one type of 'brain reader' using one student and an exercise in producing 'Theta' waves (1 x student)
4. An introduction to the next type of brain reader and explanation of the concept of EEG (1 x student)
 - Look at the **use of this in medicine/science. Disability aids**
 - Move objects on screen with their mind
 - Full colour moving image of their brain shown
 - Zoom in on neurons
5. Another student to do the same yet with the addition of a thought-controlled game (1 x student)
6. Another student to play the game (1 x student)
7. Selection of a 2nd student to play in a best of 3 thought contest (1 x student)
8. Round-up of the session, **other future uses** and quick quiz



Year 7-10

Science / STEM

Time: 60 - 75 minutes **Group size:** Unlimited yet <30 preferred **Number of students actively involved:** 6

1. Introduction: What's in our head? Brain structure including different lobes and function
2. Structure of a neuron, explanation of electrochemical system and brain waves introduced. **Brain Health** discussed
 - Alcohol & drug effects
 - Sport concussion rules
3. Demonstration of MindWave EEG using one student producing 'Theta' waves (1 x student)
4. The Emotiv 14 sensor. How it was developed and the story of **Tan Le. Movement of prosthetics/wheelchairs** (1 x student)
 - Moving objects on screen with their mind
 - Full colour moving image of their neurons shown to group.
 - Zoom in on individual neurons / axons
5. Another student with addition of a thought-controlled game (1 x student)
6. Another student to play the game (1 x student)
7. Selection of a 2nd student to play in a best of 3 thought contest (2 x student)
8. **Careers in STEM. Future EEG use.** Round-up of the session and explanation of Socratic quiz

Year 11/12

Biology/Human Biology

Yr 11: From Single Cell to Multi Cellular organisms/ The Functioning Human Body

Yr 12: Surviving in a changing environment/Homeostasis and Disease

Time: 75 - 90 minutes **Number of students actively involved:** 5 **Group size:** Unlimited yet <30 preferred

1. Introduction: What's in our head? Brain structure including different lobes and function
2. Structure of a neuron and function of a neuron, including action potential. Electrochemical system explained. Neurotransmitters introduced. Brain waves introduced.
 - **In depth:** Description of action potentials and ion exchange in neurons

OR

 - **In depth:** Description of the different parts of the nervous system
3. Demo of MindWave EEG for 'Theta' waves. **Theta & their importance in exams explained.** (1 x student)
4. Introduction to the Emotiv 14 sensor and explanation of the concept. (1 x student)
 - Moving objects on screen with their mind
 - Full colour moving image of their neurons shown to group. Axons identified
5. Selection of a student to do same with the addition of a thought-controlled game (1 x student)
6. Another student to play the game (1 x student)
7. Selection of a 2nd student to play in a best of 3 thought control contests. (1 x student)
8. **Careers in Science.** Round-up of the session and explanation of Socrative quiz.



Integrated Science

Yr 11: General Interest/STEM

Yr 12: Energy

Time: 75 -90 minutes **Number of students actively involved:** 5 **Group size:** Unlimited yet <30 preferred

1. Introduction: What's in our head? Brain structure including different lobes and function
2. Structure of a neuron and function of a neuron, including action potential. Electrochemical system explained. Neurotransmitters introduced. Brain waves introduced.
 - **In depth:** Description of neurotransmitters, method of action of common drugs of abuse and effect on your brain.
3. Demo of MindWave EEG for 'Theta' waves. **Theta & their importance in exams explained.** (1 x student)
4. Introduction to the Emotiv 14 sensor and explanation of the concept. (1 x student)
 - Moving objects on screen with their mind
 - Full colour moving image of their neurons shown to group. Axons identified
5. Selection of a student to do same with the addition of a thought-controlled game (1 x student)
6. Another student to play the game (1 x student)
7. Selection of a 2nd student to play in a best of 3 thought control contests. (1 x student)
8. **Careers in Science.** Round-up of the session and explanation of Socrative quiz.

Psychology

Yr 11 & 12: Biological Influences & Bases of behaviour/Cognition

Time: 75 -90 minutes **Number of students actively involved:** 5 **Group size:** Unlimited yet <30 preferred

1. Introduction: What's in our head? Brain structure including different lobes and function
2. Structure of a neuron and function of a neuron, including action potential. Electrochemical system explained. Neurotransmitters introduced. Brain waves introduced.
 - **In depth:** How EEG functions and brief history of EEG science.
3. Demo of MindWave EEG for 'Theta' waves. **Theta & their importance in exams explained.** (1 x student)
4. Introduction to the Emotiv 14 sensor and explanation of the concept. (1 x student)
 - Moving objects on screen with their mind
 - Full colour moving image of their neurons shown to group. Axons identified
5. Selection of a student to do same with the addition of a thought-controlled game (1 x student)
6. Another student to play the game (1 x student)
7. Selection of a 2nd student to play in a best of 3 thought control contests. (1 x student)
8. **Careers in Science.** Round-up of the session and explanation of Socratic quiz.

