

## **Debate: Instructions and Criteria**

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**What is a debate?** A debate is a formal style of discussion on a particular topic in which two opposing viewpoints are argued. Debates usually begin with one side presenting their viewpoint to an audience. The opposing side then presents their viewpoint to the audience. Both sides try to convince the audience that their viewpoint is correct by using facts and compelling language. Once both sides have presented their facts, they take time to create what is called a rebuttal, which is a counter-argument to the facts and statements presented by the opposing team. Again, both sides present their rebuttals, and then the audience is called upon to make a decision as to which side they agree with most.

**Roles in a debate:** there are three main roles of a debate.

**Audience** – in this activity, the audience will be made up of judges. The role of the judges is to listen (without bias) to both teams' arguments, take notes on the facts/statements they present, and then together with the other judges, come to a decision about which team should win.

**Team 1** – this team will argue in favour of a specific viewpoint on a topic (e.g., pollution **is** bad, GMOs **should** be avoided, etc.)

**Team 2** – this team will argue the opposite viewpoint on the topic (e.g., pollution **is not** bad, GMOs **should not** to be avoided, etc.)

**ACTIVITY – topic of debate:** can mindfulness therapy reverse the physiological effects of trauma in the brain?

## Instructions for the Debate Activity

### Get into teams of 5-7:

- **Team 1** will argue that mindfulness therapy **can** reverse physiological changes caused by trauma
- **Team 2** will argue that mindfulness therapy **cannot** reverse physiological changes caused by trauma

**On your own:** at home, take time to research the debate topic. You should bring the following information to class:

- Definition of trauma and mindfulness practice
- Parts of the brain altered by trauma and parts altered by mindfulness practices
- Definition of neuroplasticity and how it works
- **Team 1**- evidence showing effects of mindfulness therapy on people that have experienced trauma
- **Team 2**- evidence showing lack of effects of mindfulness therapy on people that have experienced trauma
- **References for the above information**  
References should include at least one scientific article with data. Other resources can include magazine or blog articles, YouTube videos, etc.

### In class, in your team:

**Choose Debate team roles** – one person should be chosen to fill each of the following tasks:

**Note taker:** this should be someone who writes legibly. This person will be responsible for writing down the team's presentation notes.

**Moderator:** because there are time limits, this person will be responsible for keeping the team on track of time.

**Presenters:** this person is someone who should like presenting, or someone who wants to challenge their public speaking skills. This person will be responsible for presenting the team's argument to the judges. One person from each team is chosen for Round 1 of the debate, and a different person is chosen for Round 2.

**Put together your argument** – based on your research, come up with a 5 minute oral presentation (optional: can use PowerPoint slides if you like) that you will use to convince the judges of your side of the argument. **Follow the judge evaluation criteria** to make sure you are maximizing the points you'll receive for your debate argument.

## Debate Breakdown

- Round1
  - Team 1 presents first, judges take notes
  - Team 2 presents, judges take notes
- Rebuttal
  - Team 1 and 2 are given 10 minutes to come up with a rebuttal
- Round 2
  - Team 2 presents their rebuttal first, judges take notes
  - Team 1 presents their rebuttal, judges take notes
- Evaluation
  - Judges take 10 minutes to discuss and choose a winning team
  - Announce the winner to the class

**Judging Criteria:** the following is the criteria that judges will follow to evaluate each teams' debate arguments. Teams should look at the criteria beforehand to make sure that they are meeting all the requirements for their debate/rebuttal arguments.

Number of Points	1	2	3
<b>References</b>	<ul style="list-style-type: none"> <li>• Did not cite any scientific articles</li> <li>• Few references were used</li> </ul>	<ul style="list-style-type: none"> <li>• Cited one scientific article</li> <li>• Adequate number of references used</li> </ul>	<ul style="list-style-type: none"> <li>• Cited two or more scientific articles</li> <li>• Adequate number of references used</li> </ul>
<b>Time Limit</b>	<ul style="list-style-type: none"> <li>• Debate <u>and</u> rebuttal both are over 5 minutes in length</li> </ul>	<ul style="list-style-type: none"> <li>• Debate <u>or</u> rebuttal (not both) are over 5 minutes in length</li> </ul>	<ul style="list-style-type: none"> <li>• Debate <u>and</u> rebuttal are both under 5 minutes long</li> </ul>
<b>Content of the Debate and Rebuttal</b>	<ul style="list-style-type: none"> <li>• Descriptions are unclear or lacking in detail</li> <li>• Missing terms relevant to the topic</li> <li>• Lacks logical flow between statements</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptions are sufficiently clear and detailed</li> <li>• Presented terms relevant to the topic</li> <li>• Logical flow between most statements</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptions are very clear and detailed</li> <li>• Presented terms relevant to the topic</li> <li>• Logical flow present throughout</li> </ul>
<b>Presentation</b>	<ul style="list-style-type: none"> <li>• Lacks interest or enthusiasm</li> <li>• Lacks compelling language</li> </ul>	<ul style="list-style-type: none"> <li>• Interesting and enthusiastic</li> <li>• Uses some compelling language</li> </ul>	<ul style="list-style-type: none"> <li>• Interesting and enthusiastic</li> <li>• Uses a lot of compelling language</li> </ul>

### Can mindfulness reverse physiological trauma in the brain?

The answer isn't a clear-cut yes or no. Consistent mindfulness therapy cannot completely erase the neural networks produced from traumatic experiences, but it can help to reduce the stimulation/triggering of these networks during recurrent stressful events, and can help to lessen the severity of the symptoms. Mindfulness therapy isn't suggested as a primary treatment for PTSD, but it has shown some efficacy when combined with standard treatments. More clinical trials need to be conducted to prove its ability to treat PTSD.

Physiologically, mindfulness practice works by reducing the size of the amygdala and the activity of the insula, and increasing the size and activity of the hippocampus, prefrontal lobe and parietal cortex, which help to boost positive responses (e.g., flexibility, less prone to being overwhelmed, etc.) to stressful situations.

So what does this mean in terms of answering the question? Mindfulness can alter brain structure, which can reduce symptoms of trauma, and it can equip trauma-survivors with resilience tools against further trauma they might experience, but as a treatment, it isn't yet conclusive. More studies need to be done to look at long-term effects and how it stands as a treatment alone.

Parts of brain affected by trauma through lens of PTSD:

- **Prefrontal cortex:** associated with coordinating complex cognitive actions such as personality expression and moderating social behaviour.
  - **Trauma:** individuals generally show fewer branches leading to the prefrontal cortex (less neural connectivity to this region, leading to less activation)
  - **Mindfulness Therapy:** increased function (more neural connections to other parts of the brain, improved activation to stressful triggers)
- **Amygdala:** involved in emotional response, decision-making and memory consolidation.
  - **Trauma:** individuals often have a larger (increased volume) or more active (more neural connections) amygdala
  - **Mindfulness Therapy:** decreased volume and less active
- **Hippocampus:** associated with memory consolidation as part of the limbic system (fight-or-flight response and stress response).
  - **Trauma:** individuals often have a smaller hippocampus (physically less volume from atrophy)
  - **Mindfulness Therapy:** increased volume
- **Parietal cortex:** processes spatial information (e.g. spatial awareness of

one's body).

- **Trauma**: similar to the prefrontal cortex, individuals have decreased parietal cortex function
- **Mindfulness Therapy**: increased neural connections (improved activation)
- **Insula**: associated with a broad array of functions, including self-awareness, empathy, interpersonal experience and perception.
  - **Trauma**: not well studied, but preliminary investigations have shown increased activity levels in trauma survivors as compared to control individuals
  - **Mindfulness Therapy**: decreased activity

**Optional**: you can share these with students as post-debate reading/video

- <https://www.youtube.com/watch?v=7TN23YiGkAQ>
- Review Mindfulness Therapy and PTSD (in activity package)