Investigating the brain- Homework preparation

**Task 1**

* **Watch this video on fMRI:** [**https://www.youtube.com/watch?v=Rb\_mdzgw-Jc**](https://www.youtube.com/watch?v=Rb_mdzgw-Jc) **(stop at 2 minutes 41 seconds)**

**Answer the following questions:**

1. What does fMRI stand for?
2. What does it mean when a brain area is more active?
3. What are the problems with trying to measure brain activity from the scalp?
4. What happens to oxygen levels when a neuron becomes more active?

* **Watch this video on fMRI:** [**https://www.youtube.com/watch?v=lLORKtkf2n8**](https://www.youtube.com/watch?v=lLORKtkf2n8) **(stop at 2 mins 40 seconds)**

**Answer the following questions:**

1. In order to get an accurate fMRI scan what does the patient have to be careful to do?
2. What does the fMRI measure?
3. What can we do with that information?
4. What part of the brain is active when the man in the video imagines playing tennis?

* **Watch this video on EEG:** [**https://www.youtube.com/watch?v=I3j2VrhqTAA**](https://www.youtube.com/watch?v=I3j2VrhqTAA) **(stop at 4 minutes 40 seconds)**

**Answer the following questions:**

1. Why do we use EEG?
2. Why is EEG a good method?
3. What does temporal resolution mean?
4. How does EEG work, on a basic level?
5. What is the most important part of the kit? How many electrodes does it have?
6. What happens to the brain waves when the individual blinks?

**Task 2**

**Read the information on ERPs in your information booklet. Use the information to answer these questions:**

1. Where does the data come from to work out ERPs?
2. What technique is used to find what response the brain has to a particular stimulus?
3. What has to be eliminated in order to get a pure event related potential?
4. Why is this method of investigating the brain better than EEGs?

**Task 3**

**Read the information on post-mortem examinations in your information booklet or use the internet to answer these questions:**

1. What does post-mortem actually mean?
2. Why or when would a post-mortem examination be carried out?
3. Why are researchers less likely to use this method now?