

Year 11 Summer term: Research methods, Mathematical specification & Revision

Research procedures.

Define the following terms: Standardised procedures, instructions to participants, randomisation, allocation to conditions, counterbalancing and extraneous variables (including explaining the effect of extraneous variables and how to control for them). Explain how they would be used in a research procedure by proving examples.

Reliability and validity

Explain the reliability and/or validity of:

- sampling methods
- experimental designs
- quantitative and qualitative methods.

Ethical issues

Explain how ethical issues in psychological research as outlined in the British Psychological Society guidelines. Explain the ways of dealing with each of these issues.

Types of data

Explain the difference between quantitative and qualitative data. Explain the difference between primary and secondary data.

Computation

Recognise and use expressions in decimal and standard form: use ratios, fractions and percentages, estimate results, find arithmetic means and use an appropriate number of significant figures. Calculate mean, median, mode and range.

Graphs

Construct and interpret frequency tables and diagrams, bar charts, histograms and scatter diagrams for correlation.

Distributions

Explain the characteristics of normal distribution.

Minimum Expected Standards Year 11 Psychology

Inside this booklet you will find a summary of all the knowledge and skills that the academy expects you to master in this subject by the end of the year.

These are the **minimum standards** that we set for all students. If you achieve this you should be on track to achieve at least a **grade 5/6 in your GCSE** in year 11.

During each half-term you will have regular '**learning checks**' to assess how well you are progressing against the expected standards. If you do not reach the expected standard in any of these checks you should be seeking help from your teacher, asking for study supports and using the materials on TGISpace to help you improve.

If you wish to push yourself further your teacher will also be sharing with you examples of how to go **beyond the expected standards**

**Tudor Grange Academy
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Year 11 Autumn term: Brain & neuropsychology

Nervous system

Explain the divisions of the human nervous system: central and peripheral (somatic and autonomic). Explain the basic functions of these divisions. Explain the autonomic nervous system and the fight or flight response.

The James-Lange theory of emotion.

Outline the James-Lange theory of emotion. Explain at least one strength and one weakness of their theory.

Neurons

Explain the difference between sensory, relay and motor neurons. Identify the parts of a neuron and explain its functionality.

Synaptic transmission

Explain how the release and reuptake of neurotransmitters within a synapse works. Explain how excitation and inhibition affect the action potential. Explain the relationship between synapses and the action potential.

Hebb's theory of learning and neuronal growth.

Outline Hebb's theory of learning making reference to plasticity/neuronal growth. Explain at least one strength or one weakness of Hebb's theory.

Brain structure

Identify and explain the areas of the brain; frontal lobe, temporal lobe, parietal lobe, occipital lobe and cerebellum. Explain the functions of the key areas of the brain structure.

Localisation of function

Explain the role of motor, somatosensory, visual, auditory and language areas (e.g: Broca/Wernicke) in the brain.

Penfield's study of the interpretive cortex

Outline the aim, method, results and conclusion of Penfield's study. Evaluate Penfield's study by making reference to GRAVE.

Cognitive neuroscience

Explain how the structure and function of the brain relate to behaviour and cognition.

Brain scanning techniques

Explain the use of scanning techniques to identify brain functioning (e.g CT, PET and fMRI scans.)

Tulving's 'gold' memory study.

Outline the aim, method, results and conclusion of Tulving's study. Evaluate Tulving's study by making reference to GRAVE.

Neurological damage

Explain how neurological damage (e.g stroke or injury) can affect motor abilities and behaviour.

Year 11 Spring term: research methods

Hypotheses

Create an appropriate hypothesis. Define key terms of null and alternative hypotheses.

Variables

Identify and explain what is meant by; independent, dependent and extraneous variables.

Sampling methods

Define what is meant by target populations and sample. Identify and explain types of sampling; random, opportunity, systematic and stratified. Explain at least one strength and one weakness of each sampling method and explain how it can be applied to data.

Experimental design

Explain what is meant by the experimental design (independent groups, repeated measures, matched pairs). Explain at least one advantages and one disadvantage of each experimental design.

Experiments

Explain what is meant by; laboratory studies, field and natural experiments. Explain at least one strength and one weakness of each experimental method.

Self-report techniques

Explain what is meant by interviews and questionnaires. Explain how open and closed questions work. Explain the difference between structured and unstructured interviews. Identify and explain at least one strength and one weakness of self-report data.

Case studies

Explain the key features of a case study. Explain at least one strength and one weakness of this method.

Observation studies

Explain the types of observations (lab vs naturalistic). Explain the key features of observations, including categories of behaviour. Explain at least one strength and one weakness of using observations (including inter-observer reliability).

Correlations

Explain the association between two variables. Sketch a scatter graph to show possible correlational relationships. Explain one advantage and one limitation of correlations.