



# OCR Level 3 Advanced GCE in Psychology (H567) Specification

Version 1: First assessment 2017

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# 1 Why choose an OCR A Level in Psychology?

# 1a. Why choose an OCR qualification?

Choose OCR and you've got the reassurance that you're working with one of the UK's leading exam boards. Our new A Level in Psychology course has been developed in consultation with teachers, employers and Higher Education to provide students with a qualification that's relevant to them and meets their needs.

We're part of the Cambridge Assessment Group, Europe's largest assessment agency and a department of the University of Cambridge. Cambridge Assessment plays a leading role in developing and delivering assessments throughout the world, operating in over 150 countries.

We work with a range of education providers, including schools, colleges, workplaces and other institutions in both the public and private sectors. Over 13,000 centres choose our A levels, GCSEs and vocational qualifications including Cambridge Nationals, Cambridge Technicals and Cambridge Progression.

### **Our Specifications**

We believe in developing specifications that help you bring the subject to life and inspire your students to achieve more.

We've created teacher-friendly specifications based on extensive research and engagement with the teaching community. They're designed to be straightforward and accessible so that you can tailor the delivery of the course to suit your needs.

We aim to encourage students to become responsible for their own learning, confident in discussing ideas, innovative and engaged. We provide a range of support services designed to help you at every stage, from preparation through to the delivery of our specifications. This includes:

- A wide range of high-quality creative resources including:
  - Delivery Guides
  - Transition Guides
  - Topic Exploration Packs
  - o Lesson Elements
  - o ...and much more.
- Access to subject specialists to support you through the transition and throughout the lifetimes of the specifications.
- CPD/Training for teachers including faceto-face events to introduce the qualifications and prepare you for first teaching.
- Active Results our free results analysis service to help you review the performance of individual students or whole schools.
- ExamCreator our new online past papers service that enables you to build your own test papers from past OCR exam questions.

All A level qualifications offered by OCR are accredited by Ofqual, the Regulator for qualifications offered in England.

# 1b. Why choose an OCR A Level in Psychology?

This practical and engaging course has been redeveloped after feedback from teachers and other key stakeholders. The content has been designed to inspire, nurture and develop learners. The most popular aspects of previous qualifications have been retained or enhanced and new exciting content has been added.

The OCR A Level qualification in Psychology encourages learners to be inspired, motivated and challenged by following a broad, coherent, practical, satisfying and worthwhile course of study. The specification provides insight into, and experience of, how psychology works, stimulating learners' curiosity and encouraging them to engage with psychology in their everyday lives, enabling them to make informed choices about further study and about career choices.

# Aims and learning outcomes

The main purpose of this qualification is to prepare learners by providing a suitable foundation for the study of psychology or related courses in Higher Education.

A further purpose of this qualification is to prepare learners intending to pursue careers or further study in social sciences, or as part of a general education.

The OCR A Level qualification in Psychology enables learners to:

 develop essential knowledge and understanding of different areas of the subject and how they relate to each other

- develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods
- develop competence and confidence in a variety of practical, mathematical and problem solving skills
- develop their interest in and enthusiasm for the subject, including developing an interest in further study and careers associated with the subject
- understand how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society.

# 1c. What are the key features of this specification?

The OCR A Level in Psychology is made up of **three** mandatory components, which are externally assessed.

Here are some of the key features of our new A Level in Psychology specification for you and your learners:

- straightforward structure, which includes focused content
- improved support, resources and teacher guidance

- a practical approach to the study of research methods
- a reworked core studies unit
- choice for teachers and learners with options in Applied psychology (Component 03)
- suitability for different learning styles
- the first year of this course is coteachable with the OCR AS Level in Psychology qualification.

# 1d. How do I find out more information?

If already using OCR specifications you can contact us at: <a href="https://www.ocr.org.uk">www.ocr.org.uk</a>

If not already registered you can find out more information at: <a href="https://www.ocr.org.uk">www.ocr.org.uk</a>

Want to find out more?

Ask a subject specialist

Email: <a href="mailto:psychology@ocr.org.uk">psychology@ocr.org.uk</a>

Telephone: 01223 553998

Join our Psychology community:

http://social.ocr.org.uk/

# 2 The specification overview

# 2a. Overview of A Level in Psychology (H567)

Learners must complete all components (01, 02 and 03).

# **Content Overview**

# **Assessment Overview**

Planning, conducting, analysing and reporting psychological research across a range of experimental and non-experimental methodologies and techniques.

Research methods (01)\*

90 marks

written paper 2 hours

**30%** of total A level

Introduces some of the central areas of investigation in psychology organised in key themes. Each key theme is represented by a classic and a contemporary core study.

Psychological themes through core studies (02)\*

105 marks

written paper 2 hours

**35%** of total A level

Compulsory section on Issues in mental health.

Learners will also study **two** out of the following applied options: Child psychology, Criminal psychology, Environmental psychology, Sports and exercise psychology. Applied psychology (03)

105 marks

written paper 2 hours

**35%** of total A level

<sup>\*</sup> Indicates synoptic assessment.

# 2b. Content of A Level in Psychology (H567)

# Research methods (Component 01)

Learners will need to be familiar with the **four** main techniques for collecting/analysing data.

These are:

- self-report
- experiment
- observation
- correlation.

Learners will also need to be familiar with the following:

- planning and conducting research
- data recording, analysis and presentation
- report writing
- science in psychology.

Learners will be expected to carry out their own small scale practical activities and reflect on their experiences.

# Psychological themes through core studies (Component 02)

Learners will need to be familiar with the **ten** key themes and the classic and contemporary core study located within each.

Learners will also need to be familiar with the following:

- areas and perspectives in psychology
- methodological issues relating to the core studies
- · debates in psychology.

# Applied psychology (Component 03)

Learners will need to be familiar with **one** compulsory section, Issues in mental health, which provides an introduction to the topic of mental health.

Learners will also study **two** out of the following applied psychology options:

- Child psychology
- Criminal psychology
- Environmental psychology
- Sports and exercise psychology.

Learners will need to be familiar with the issues and debates that run through this component.

# 2c. Content of Research methods (Component 01)

This component introduces and develops knowledge and understanding of the process of planning, conducting, analysing and reporting psychological research across a range of experimental and non-experimental methodologies and techniques.

It promotes an understanding of the methods of scientific enquiry used in empirical research and aims to develop relevant knowledge and skills for this process. It also encourages the acquisition of a range of evaluative concepts for reviewing and discussing the design and outcomes of research, and the application of such knowledge to the wider community, society and the economy.

Competency and confidence in a variety of mathematical procedures and problemsolving skills should also be gained through involvement with practical work associated with the concepts covered.

Where possible and appropriate, links should be made with the content of the other components for example, to illustrate the use of a particular statistical technique or application of evaluative issues.

Learners are expected to use appropriate methodology, including information and communication technology.

# Research methods and techniques

1.1 Research methods and techniques	Learners should have knowledge and understanding of the following research methods and techniques and their associated strengths and weaknesses:	
Experiment	<ul> <li>laboratory experiment</li> <li>field experiment</li> <li>quasi experiment.</li> </ul>	
Observation	<ul> <li>structured</li> <li>unstructured</li> <li>naturalistic</li> <li>controlled</li> <li>participant</li> <li>non-participant</li> <li>overt</li> <li>covert.</li> </ul>	
Self-report	<ul> <li>questionnaire</li> <li>Interviews:         <ul> <li>structured, semi-structured, unstructured.</li> </ul> </li> </ul>	
Correlation	<ul> <li>obtaining data for correlational analysis</li> <li>positive correlation</li> <li>negative correlation</li> <li>no correlation.</li> </ul>	

# Planning and conducting research

1.2 Planning and conducting research	Learners should be familiar with the following features of planning and conducting research and their associated strengths and weaknesses:
Aims and hypotheses and how to formulate	<ul> <li>research aim</li> <li>research question</li> <li>null hypotheses</li> <li>alternative hypotheses</li> <li>one-tailed (directional) hypotheses</li> <li>two-tailed (non-directional) hypotheses.</li> </ul>
Populations, samples and sampling techniques	<ul> <li>target population and sample</li> <li>random sampling</li> <li>snowball sampling</li> <li>opportunity sampling</li> <li>self-selected sampling.</li> </ul>
Experimental designs	<ul> <li>repeated measures design</li> <li>independent measures design</li> <li>matched participants design.</li> </ul>
Variables and how they are operationalised	<ul> <li>independent variable (IV)</li> <li>dependent variable (DV)</li> <li>control of extraneous variables.</li> </ul>
Designing observations	<ul> <li>behavioural categories</li> <li>coding frames</li> <li>time sampling</li> <li>event sampling.</li> </ul>
Designing self-reports	<ul> <li>open questions</li> <li>closed questions</li> <li>rating scales: <ul> <li>Likert rating scale, Semantic differential rating scale.</li> </ul> </li> </ul>

1.3 Data recording, analysis and presentation  Raw data	Learners should be able to demonstrate knowledge and understanding of the process and procedures involved in the collection, analysis and presentation of data. This will necessitate the ability to perform some calculations (please see Appendix 5c for examples of mathematical requirements).  • design of raw data recording tables • use of raw data recording tables • standard and decimal form • significant figures • make estimations from data collected.
Levels and types of data	<ul> <li>nominal level data</li> <li>ordinal level data</li> <li>interval level data</li> <li>quantitative data</li> <li>qualitative data</li> <li>primary data</li> <li>secondary data.</li> </ul>
Descriptive statistics	<ul> <li>measures of central tendency <ul> <li>mode, median, mean.</li> </ul> </li> <li>measures of dispersion <ul> <li>variance, range, standard deviation.</li> </ul> </li> <li>ratio <ul> <li>percentages</li> <li>fractions</li> </ul> </li> <li>frequency tables (tally chart)</li> <li>line graph</li> <li>pie charts</li> <li>bar charts</li> <li>histograms</li> <li>scatter diagram.</li> </ul>
Inferential statistics	<ul> <li>normal distribution curves</li> <li>skewed distribution curves</li> <li>probability</li> <li>significance levels</li> <li>using statistical tables of critical values</li> <li>criteria for using a parametric test</li> <li>criteria for using a specific non-parametric inferential test (Mann-Whitney U test, Wilcoxon Signed Ranks test, Chi-square, Binomial Sign test and Spearman's Rho)</li> <li>understand the use of specific non-parametric inferential tests (Mann-Whitney U test, Wilcoxon Signed Ranks test, Chi-square, Binomial Sign test and Spearman's Rho)</li> </ul>

	<ul><li>type 1 errors</li><li>type 2 errors</li></ul>
	• symbols: =, <, <<, >>,>, ∝, ~.
Methodological issues	<ul> <li>representativeness</li> <li>generalisability</li> <li>reliability:         <ul> <li>Internal, External, Inter-rater, Test-retest, Split-half</li> </ul> </li> <li>validity:         <ul> <li>Internal, Face, Construct, Concurrent, Criterion, External, Population, Ecological</li> </ul> </li> <li>demand characteristics</li> <li>social desirability</li> <li>researcher/observer bias</li> <li>researcher/observer effect(s)</li> <li>ethical considerations, including the British Psychological Society's Code of Ethics and Conduct:         <ul> <li>Respect - informed consent, right to withdraw, confidentiality</li> <li>Competence</li> <li>Responsibility - protection of participant, debrief</li> <li>Integrity - deception</li> </ul> </li> </ul>

# Report writing

1.4 Report writing  Sections and	Learners should have knowledge of the conventions of reporting research in a practical report and demonstrate understanding of the role and purpose of each of the main sections and sub-sections.
sub-sections of a practical report	<ul> <li>introduction</li> <li>method (design, sample, materials/apparatus, procedure)</li> <li>results</li> <li>discussion</li> <li>references</li> <li>appendices.</li> </ul>
Citing academic references	<ul> <li>a familiarity with citing academic research using the Harvard system of referencing,</li> <li>e.g. Milgram, S. (1963) Behavioural study of obedience. <i>Journal of Abnormal and Social Psychology</i>, 67, (4), 371–378.</li> </ul>
Peer review	<ul> <li>appreciate the role of the psychological community in validating new knowledge and ensuring integrity through the process of peer review.</li> </ul>

1.5 Practical activities	Learners are expected to conduct and analyse their own small-scale research practicals, including appropriate risk assessment and management, (please see appendix 5d).  In order to become fully familiar with the content of this component, it is suggested that learners create a research portfolio using appropriate information communication technology and write-up the practicals they conduct.
	Learners should have experience of the following practical activities:  • self-report • observation • experiment • correlation.

# How science works

1.6 How science works	Learners should understand how society makes decisions about scientific issues and how psychology contributes to the success of the economy and society  Learners should be aware of the nature and principles of scientific enquiry through knowledge and understanding of the following concepts:  • the study of cause-and-effect • falsification • replicability • objectivity • induction • deduction • hypothesis testing • manipulation of variables • control and standardisation • quantifiable measurements.
	quantifiable measurements.

# 2c. Content of Psychological themes through core studies (Component 02)

Psychological themes through core studies (Component 02) aims to develop the critical thinking and independent learning skills essential to the scientific study of psychology through a focus on some of the key themes investigated within the subject. For each key theme, learners are presented with both a classic and a contemporary study. The classic studies are 'landmark' pieces of research that have helped to shape the

The contemporary studies are more 'up-to-date' pieces of research that engage in some way with the issues being explored in the classic studies they are paired with. The core studies chosen reflect the contribution of psychology to an understanding of individual, social and cultural diversity.

The classic studies are 'landmark' pieces of research that have helped to shape the course of the subject and which all learners of psychology should become familiar with.

It also develops learners' ability to make evaluative points about the studies and their ability to see the studies in the wider perspective of psychological areas/perspectives, issues and debates.

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# Section A: Core studies

### **Section A: Core studies**

This section will assess the learners' knowledge and understanding of the core studies as well as their ability to evaluate the studies both on their own and in relation to the study they have been paired with. The core studies are placed within a broad area of investigation. Within each area, the learners are required to examine four core studies. These core studies are paired together around key themes. For each key theme, the learners need to examine both a classic and a contemporary study. The classic studies have been carefully selected on the basis of their historical importance. Holistically the studies have been selected to represent a variety of research methodologies, designs, samples, sampling methods, issues and debates. For full references please see appendix 5d.

Area	Key theme	Classic study	Contemporary study
Social	Responses to people in authority	Milgram (1963) Obedience	Bocchiaro et al. (2012) Disobedience and whistle- blowing
	Responses to people in need	Piliavin et al. (1969) Subway Samaritan	Levine et al. (2001) Cross-cultural altruism
Cognitive	Attention	Moray (1959) Auditory attention	Simons and Chabris (1999) Visual inattention
	Memory	Loftus and Palmer (1974) Eyewitness testimony	Grant et al. (1998) Context-dependent memory
Developmental	External influences on children's behaviour	Bandura et al. (1961) Transmission of aggression	Chaney et al. (2004) Funhaler study
	Moral development	Kohlberg (1968) Stages of moral development	Lee et al. (1997) Evaluations of lying and truth- telling

cont. Section A: Core studies			
Area	Key theme	Classic study	Contemporary study
Biological	Regions of the brain	Sperry (1968) Split brain study	Casey et al. (2011)  Neural correlates of delay of gratification
	Brain plasticity	Blakemore and Cooper (1970) Impact of early visual experience	Maguire et al. (2000) Taxi drivers
Individual differences	Understanding disorders	Freud (1909) Little Hans	Baron-Cohen et al. (1997) Autism in adults
	Measuring differences	Gould (1982) A nation of morons Bias in IQ testing	Hancock et al. (2011) Language of psychopaths

Section A: Core Studies	Content
Individual studies	<ul> <li>'Tell the story' of each core study in terms of:</li> <li>background</li> <li>method <ul> <li>design</li> <li>sample</li> <li>materials/apparatus</li> <li>procedure</li> </ul> </li> <li>results</li> <li>conclusions.</li> </ul>
Core studies in their pairs	<ul> <li>How the two studies are similar.</li> <li>How the two studies are different.</li> <li>To what extent the contemporary study changes our understanding of the key theme.</li> <li>To what extent the contemporary study changes our understanding of individual, social and cultural diversity</li> </ul>
Methodological issues	<ul> <li>The strengths and weaknesses of the different research methods and techniques.</li> <li>The strengths and weaknesses of different types of data.</li> <li>Ethical considerations.</li> <li>Validity.</li> <li>Reliability.</li> <li>Sampling bias.</li> <li>Ethnocentrism.</li> </ul>
Key themes and areas of psychology	<ul> <li>How each core study relates to its key theme.</li> <li>How each core study relates to the area of psychology it is placed within.</li> </ul>

# **Section B: Areas, perspectives and debates**

In this section, learners will be asked questions that invite them to generate an extended discussion, recognising the inter-relationship between different areas, perspectives and debates in psychology. They will not be limited in terms of the studies they can refer to in their answers. The specification places core studies within particular areas, but learners may make reference to studies from across the components and may also argue that a core study placed within one area can be seen as falling within another area.

Studies that come from a behaviourist perspective include Bandura's research into transmission of aggression and Chaney's Funhaler study, while psychodynamic ideas are referred to in the research by Freud (Little Hans), Kohlberg (stages of moral development) and Hancock (language of psychopaths); however, learners may refer to other studies.

Areas, perspectives and debates	Content
Areas	<ul> <li>The defining principles and concepts of each area.</li> <li>Research to illustrate each area.</li> <li>Strengths and weaknesses of each area.</li> <li>Applications of each area.</li> <li>How each area is different from and similar to other areas.</li> </ul>
Perspectives	<ul> <li>The defining principles and concepts of each perspective.</li> <li>Research to illustrate each perspective.</li> <li>Strengths and weaknesses of each perspective.</li> <li>Applications of each perspective.</li> <li>How each perspective is different from and similar to the other perspective.</li> </ul>
<ul> <li>Debates</li> <li>Nature/nurture</li> <li>Freewill/determinism</li> <li>Reductionism/holism</li> <li>Individual/situational explanations</li> <li>Usefulness of research</li> <li>Ethical considerations</li> <li>Conducting socially sensitive research</li> <li>Psychology as a science</li> </ul>	<ul> <li>The defining principles and concepts of each debate.</li> <li>Different positions within each debate.</li> <li>Research to illustrate different positions within each debate.</li> <li>Applications of different positions within each debate.</li> <li>How each debate is different from and similar to other debates.</li> </ul>

# Section C: Practical applications

In order to encourage awareness of practical applications of psychology, this section will require learners to apply their knowledge and understanding of psychology to a novel source as provided in the examination. The source could be a newspaper or magazine article, a blog, a diary entry, email exchange or equivalent written source. It is advised that teachers prepare learners for this section by giving them a variety of sources to consider.

Practical applications	Content
The practical applications of psychology	<ul> <li>Recognise the psychological content in the source.</li> <li>Make evidence-based suggestions in relation to the source.</li> <li>Consider the strengths and weaknesses of the suggestion(s) they themselves are making.</li> </ul>

# 2c. Content of Applied psychology (Component 03)

This component consists of **one** compulsory section:

Issues in mental health.

Learners will also choose to study **two** out of the following applied psychology options:

- Child psychology
- Criminal psychology
- Environmental psychology
- Sports and exercise psychology.

Each topic contains the following:

# **Background**

With reference to psychology, learners should be able to explain and exemplify the background and consider relevant issues and debates in relation to the topic area.

# Key research

Learners should be able to describe the key research and appreciate how it relates to the topic area.

# **Application**

Learners should be able to relate the application to a novel situation.

There are a number of methodological issues and debates that run throughout Applied psychology (Component 03).

The assessment will require learners to apply these issues and debates across a range of topics, further developing the material in the specification and making links between the issues and debates and the content of this component.

Methodological issues and debates	Content
<ul> <li>Nature/nurture</li> <li>Freewill/determinism</li> <li>Reductionism/holism</li> <li>Individual/situational explanations</li> <li>Usefulness of research</li> <li>Ethical considerations</li> <li>Conducting socially sensitive research</li> <li>Psychology as a science</li> <li>Ethnocentrism</li> <li>Validity</li> <li>Reliability</li> <li>Sampling bias.</li> </ul>	<ul> <li>Description of concepts, theories and studies specified by the indicative content.</li> <li>Application of methodological issues and debates in psychology.</li> <li>Recognition of the contribution the key research has made to the topic.</li> <li>Application of the background, key research and application to novel situations with which psychologists might be concerned.</li> <li>Consideration of ways in which different areas of psychology can inform our understanding of applied psychology.</li> <li>Exploration of social, moral, cultural and spiritual issues where applicable.</li> <li>Recognition of how the key research contributes to an understanding of individual, social and cultural diversity.</li> <li>Recognition of how society makes decisions about scientific issues and how psychology contribute to the success of the economy and society.</li> </ul>

	Section A: Issues in mental health			
Topic	Topic Background Key research Application			
The historical context of mental health	<ul> <li>Historical views of mental illness</li> <li>Defining abnormality</li> <li>Categorising mental disorders</li> </ul>	Rosenhan (1973) On being sane in insane places.	Characteristics of an affective disorder, a psychotic disorder and an anxiety disorder.	
The medical model	<ul> <li>The biochemical explanation of mental illness</li> <li>The genetic explanation of mental illness</li> <li>Brain abnormality as an explanation of mental illness</li> </ul>	Gottesman et al. (2010) Disorders in offspring with two psychiatrically ill parents.	Biological treatment of one specific disorder.	
Alternatives to the medical model	<ul> <li>The behaviourist explanation of mental illness</li> <li>The cognitive explanation of mental illness</li> <li>One from:         <ul> <li>the humanistic explanation of mental illness</li> </ul> </li> <li>the psychodynamic explanation of mental illness</li> <li>the cognitive neuroscience explanation of mental illness.</li> </ul>	Szasz (2011) The myth of mental illness: 50 years later.	Non-biological treatment of one specific disorder.	

Section B: Option 1 Child psychology (choose two out of the four options)

	Section B: Option 1 Child psychology			
Topic	Background	Key research	Application	
Intelligence (Biological)	What psychologists mean by intelligence and what biological factors could affect intelligence.	Van Leeuwen et al. (2008) A twin-family study of general IQ.	At least one method of assessing intelligence.	
Pre-adult brain development (Biological)	levelopment impact of this on risk taking Biological) impact of this on risk taking behaviour. Galván (2014) to reduce risk taking behaviours using		knowledge of brain	
Perceptual development (Cognitive)	Perceptual development in children and how this can be studied in babies and animals.	Gibson and Walk (1960) The visual cliff.	At least one play strategy to develop perception in young children.	
Cognitive development and education (Cognitive)	Cognitive development in children and the impact of this on education.	Wood et al. (1976) The role of tutoring in problem-solving	At least one cognitive strategy to improve revision or learning.	
Development of attachment (Social)	The development of attachment in babies and the impact of failure to develop attachments.	Ainsworth and Bell (1970) Attachment, Exploration and Separation: Illustrated by the Behavior of One-year-olds in a Strange Situation.	At least one strategy to develop an attachment friendly environment.	
Impact of advertising on children (Social)	The influence of television advertising on children and the stereotyping in such advertising.	Johnson and Young (2002) Gendered voices in children's advertising.	At least one strategy to reduce impact of advertising which is aimed at children.	

Section B: Option 2 Criminal psychology (choose two out of the four options)

	Section B: Option 2 Criminal psychology			
Topic Background Key research Applicat				
What makes a criminal? (Biological)	Physiological and non- physiological explanations of criminal behaviour.	Raine et al. (1997) Brain abnormalities in murderers indicated by positron emission tomography.	At least one biological strategy for preventing criminal behaviour.	
and processing of forensicin the collection and processing of forensicWill the introduction of an emotional contextfor reducing bia the collection ar		At least one strategy for reducing bias in the collection and processing of forensic evidence.		
Collection of evidence (Cognitive)	Collection and use of evidence from witnesses and suspects.	Memon, A. and Higham, P. A. (1999) A review of the cognitive interview. Psychology, Crime and Law. 5, (1–2), 177–196.	At least one strategy for police interviews.	
Psychology and the courtroom (Cognitive)	How juries can be persuaded by the characteristics of witnesses and defendants.	Dixon et al. (2002) The Role of Accent and Context in Perceptions of Guilt.	At least one strategy to influence jury decision making.	
Crime prevention (Social)	How the features of neighbourhoods and a zero tolerance policy can influence crime.	Wilson and Kelling (1982) The police and neighbourhood safety: Broken windows.	At least one strategy for crime prevention.	
Effect of imprisonment (Social)	Punishment and reform as responses to criminal behaviour.	Haney et al. (1973) Study of prisoners and guards in a simulated prison.	At least one strategy for reducing reoffending.	

Section B: Option 3 Environmental psychology			
Topic Background Key research Applicat			Application
Stressors in the environment (Biological)	Environmental stressors and their impact on our biological responses.	Black and Black (2007) Aircraft noise exposure and resident's stress and hypertension.	At least one strategy for managing environmental stress.
Biological rhythms (Biological)	Biological rhythms and the impact of their disruption on our behaviour.	Czeisler et al. (1982) Rotating shift work schedules that disrupt sleep are improved by applying circadian principles.	At least one strategy for reducing effects of jetlag or shift work.
Recycling and other conservation behaviours (Cognitive)	Conservation behaviours and the factors which influence the tendency to conserve or recycle.	Lord (1994) Motivating recycling behaviour: A quasi- experimental investigation of message and source strategies.	At least one technique used to increase recycling or other conservation behaviour.
Ergonomics – human factors (Cognitive)	Cognitive overload and the impact of observation in the workplace environment.	Drews and Doig (2014) Evaluation of a configural vital sign display for intensive care unit nurses.	At least one workplace design based on ergonomic research.
Psychological effects of built environment (Social)	The impact of the built environment and urban renewal on our wellbeing.	Ulrich (1984) View through a window may influence recovery from surgery.	At least one example of environmental design used to improve health/wellbeing.
Territory and personal space (Social)	Territory and personal space in the workplace.	Wells (2000) Office clutter or meaningful personal displays: The role of office personalization in employee and organisational well- being.	At least one office design strategy based on research into territory or personal space.

Section B: Option 4 Sport and exercise psychology (choose **two** out of the four options)

Section B: Option 4 Sport and exercise psychology				
Topic	Background	Key research	Application	
Arousal and anxiety (Biological)	Optimising arousal, controlling anxiety and measuring anxiety in sport.	Fazey and Hardy (1988) The inverted-U hypothesis: A catastrophe for sport psychology.	At least one technique for managing arousal and anxiety in sport.	
Exercise and mental health (Biological)	Benefits of exercise to mental health.	Lewis et al. (2014) Mood changes following social dance sessions in people with Parkinson's Disease.	At least one exercise strategy to improve mental health.	
Motivation (Cognitive)	Self-efficacy and sports confidence, including imagery and sports orientation.	Munroe-Chandler et al. (2008) Playing with confidence: the relationship between imagery use and self-confidence and self-efficacy in youth soccer players.	At least one strategy for motivating athletes.	
Personality (Cognitive)	Personality, its measurement and its relationship to sport.	Kroll and Crenshaw (1970) Multivariate personality profile analysis of four athletic groups.	At least one strategy for using knowledge of personality to improve sports performance.	
Performing with others (Social)	Teams, coaching and leadership.	Smith et al. (1979) Coach effectiveness training: a cognitive- behavioural approach to enhancing relationship skills in youth sports coaches.	At least one strategy for improving team performance.	
Audience effects (Social)	How an audience can facilitate or inhibit sports performance; home advantage.	Zajonc et al. (1969) Social enhancement and impairment of performance in the cockroach.	At least one strategy for training for and playing spectator sports.	

# 2d. Prior knowledge, learning and progression

No prior knowledge of the subject is required. The specification builds on, but does not depend on, the knowledge, understanding and skills specified for GCSE Psychology.

It is recommended that learners have attained communication and literacy skills at a level equivalent to a GCSE in English at Grade C or above.

Throughout the course of study learners are encouraged to develop an awareness of the role of psychology in society and its applications to many situations.

The qualification is therefore suitable for learners intending to pursue any career in which an understanding of human behaviour is needed. The qualification is also suitable for any further study in social sciences, or as part of a course of general education.

There is an emphasis on research skills and enquiry in order to enable the learner to progress into higher levels of education. The specification therefore provides a suitable foundation for the study of psychology and/or related courses in Higher Education.

# 3 Assessment of OCR A Level in Psychology

# 3a. Forms of assessment

# Research methods (Component 01)

Learners are permitted to use a scientific or graphical calculator for Research methods (Component 01). Calculators are subject to the rules in the document *Instructions for Conducting Examinations*, published annually by JCQ (<a href="www.jcq.org.uk">www.jcq.org.uk</a>). At least 30 of the marks available for this component will be for assessment of mathematics in the context of psychology.

# **Section A: Multiple choice**

20 questions from across the component content. Questions could also relate to the research methods used in the core studies.

# Section B: Research design and response

Assessment will focus on a novel source. The themes for questions will be:

- the planning and design of research
- the evaluation of research
- improvements to research.

# Section C: Data analysis and interpretation

This section will require learners to analyse and interpret novel data or a piece of hypothetical research using descriptive and/or inferential statistics.

# Psychological themes through core studies (Component 02)

### **Section A: Core studies**

Questions based on the core studies individually, in their pairs or in terms of their key theme.

# Section B: Areas, perspectives and debates

Questions will focus on areas, perspectives and debates.

# Section C: Practical applications

Questions will require learners to apply their knowledge and understanding of psychology to a novel source.

# Applied psychology (Component 03)

### Section A: Issues in mental health

Compulsory questions. These will range from short answer to extended response questions.

# **Section B: Options**

Learners answer **one** question from each of the **two** options they have studied. Each question will have three question parts. Section B has **four** options:

- Child psychology
- Criminal psychology
- Environmental psychology
- Sport and exercise psychology.

# 3b. Assessment objectives (AO)

There are three assessment objectives in OCR's A Level in Psychology.

These are detailed in the table below. Learners are expected to demonstrate their ability to:

	Assessment Objectives	
AO1	Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.	
AO2	Apply knowledge and understanding of scientific ideas, processes, techniques and procedures:  in a theoretical context in a practical context when handling qualitative data when handling quantitative data.	
AO3	Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to:  make judgements and reach conclusions develop and refine practical design and procedures.	

# AO weightings in OCR A Level in Psychology

The relationship between the assessment objectives and the components are shown in the following table:

Component	% of overall A level		
	AO1	AO2	AO3
Research methods (01)	9 – 11	12 – 14	8 – 9
Psychological themes through core studies (02)	13 – 15	5 – 7	15 – 17
Applied psychology (03)	8 - 9	13 – 14	12 – 14
Total	30 – 35%	30 – 35%	35 – 40%

# 3c. Assessment availability

There will be one examination series available each year in May/June to **all** learners. All examinations must be taken in a single examination series. This specification will be certificated from the June 2017 examination series onwards.

# 3d. Retaking the qualification

Learners can retake the qualification as many times as they wish. They retake all components of the qualification.

# 3e. Assessment of extended response

The assessment materials for this qualification provide learners with the opportunity to demonstrate their ability to construct and develop a sustained and

coherent line of reasoning and marks for extended responses are integrated into the marking criteria.

# 3f. Synoptic assessment

Synoptic assessment draws together the knowledge, understanding and skills learnt in different aspects of the A level course. Synoptic assessment allows learners to demonstrate their understanding between different aspects of the subject.

Synoptic assessment is included in both Component 01 and Component 02.

Learners are encouraged to think holistically and develop their skills of thinking as a psychologist.

# 3g. Calculating qualification results

A learner's overall qualification grade for OCR A Level in Psychology will be calculated by adding together their marks from the three components taken to give their total weighted mark.

This mark will then be compared to the qualification level grade boundaries for the qualification for the relevant exam series to determine the learner's overall qualification grade.

# 4 Admin: what you need to know

The information in this section is designed to give an overview of the processes involved in administering this qualification so that you can speak to your exams officer. All of the following processes require you to submit something to OCR by a specific deadline.

More information about these processes, together with the deadlines, can be found in the OCR *Admin Guide and Entry Codes: 14–19 Qualifications*, which can be downloaded from the OCR website: www.ocr.org.uk

# 4a. Pre-assessment

# Estimated entries

Estimated entries are your best projection of the number of learners who will be entered for a qualification in a particular series. Estimated entries should be submitted to OCR by the specified deadline. They are free and do not commit your centre in any way.

### Final entries

Final entries provide OCR with detailed data for each learner, showing each assessment to be taken. It is essential that you use the correct entry, considering the relevant entry rules. Final entries must be submitted to OCR by the published deadlines or late entry fees will apply.

All learners taking OCR A Level in Psychology must be entered for H567.

Entry code	Title	Component code	Component title	Assessment type
		01	Research methods	External Assessment
H567	Psychology	02	Psychological themes through core studies	External Assessment
		03	Applied psychology	External Assessment

# Estimated grades

An estimated grade is the grade the centre expects a learner to achieve for a

qualification. These should be submitted to OCR by the specified deadline.

# 4b. Accessibility and special consideration

Reasonable adjustments and access arrangements allow learners with special educational needs, disabilities or temporary injuries to access the assessment and show what they know and can do, without changing the demands of the assessment. Applications for these should be made before the examination series.

Detailed information about eligibility for access arrangements can be found in the

JCQ Access Arrangements and Reasonable Adjustments.

Special consideration is a post-assessment adjustment to marks or grades to reflect temporary injury, illness or other indisposition at the time the assessment was taken.

Detailed information about eligibility for special consideration can be found in the JCQ *A guide to the special consideration process*.

# 4c. External assessment arrangements

Regulations governing examination arrangements are contained in the JCQ *Instructions for conducting examinations*.

# 4d. Results and certificates

# Grade scale

A level qualifications are graded on the scale: A\*, A, B, C, D, E, where A\* is the highest. Learners who fail to reach the minimum

standard for E will be Unclassified (U). Only subjects in which grades A\* to E are attained will be recorded on certificates.

# Results

Results are released to centres and learners for information to allow any queries to be resolved **before** certificates are issued.

Centres will have access to the following results' information for each learner:

- the grade for the qualification
- the raw mark for each component
- the total weighted mark for the qualification.

The following supporting information will be available:

- raw mark grade boundaries for each component
- weighted mark grade boundaries for each qualification.

Until certificates are issued, results are deemed to be provisional and may be subject to amendment. A learner's final results will be recorded on an OCR certificate. The qualification title will be shown on the certificate as 'OCR Level 3 Advanced GCE in Psychology'.

# 4e. Post-results services

A number of post-results services are available:

- Enquiries about results If you are not happy with the outcome of a learner's results, centres may submit an enquiry about results.
- Missing and incomplete results This service should be used if an individual subject result for a learner is missing, or the learner has been omitted entirely from the results supplied.
- Access to scripts Centres can request access to marked scripts.

# 4f. Malpractice

Any breach of the regulations for the conduct of examinations and coursework may constitute malpractice (which includes maladministration) and must be reported to OCR as soon as it is detected.

Detailed information on malpractice can be found in the JCQ Suspected Malpractice in Examinations and Assessments: Policies and Procedures.

# 5 Appendices

# 5a. Grade Descriptors

Details to be confirmed by Ofqual.

# 5b. Overlap with other qualifications

There is a small degree of overlap between the content of this specification and that for the current OCR A Level in Physical Education.

# 5c. Avoidance of bias

The A level qualification and subject criteria have been reviewed in order to identify any feature which could disadvantage learners who share a protected characteristic as defined by the Equality Act 2010. All reasonable steps have been taken to minimise any such disadvantage.

# 5d. Mathematical requirements (Component 01)

Within A Level in Psychology, 10% of the marks available within written examinations will be for assessment of mathematics (in the context of psychology) at a Level 2 standard, or higher. Lower level mathematical skills may still be assessed within examination papers but will not count within the 10% weighting for psychology. All assessment of these skills will be in the component 1 examination.

The following will be counted as Level 2 (or higher) mathematics:

- application and understanding requiring choice of data or equation to be used
- problem solving involving use of mathematics from different areas of

- maths and decisions about direction to proceed
- questions involving use of A level mathematical content (as of 2012), e.g. use of logarithmic equations.

The following will not be counted as Level 2 mathematics:

- simple substitution with little choice of equation or data
- structured question formats using GCSE mathematics (based on 2012 GCSE mathematics content).

The table below provides some examples of the mathematical requirements which will be assessed in Component 01.

	Mathematical skills	Exemplification of mathematical skill in the context of A level psychology (assessment is not limited to the examples given below)
D.0 - ari	thmetic and numerical computation	
D.0.1	Recognise and use expressions in decimal and standard form	For example, converting data in standard form from a results table into decimal form in order to construct a pie chart.
D.0.2	Use ratios, fractions and percentages	For example, calculating the percentages of cases that fall into different categories in an observation study.
D.0.3	Estimate results	For example, commenting on the spread of scores for a set of data, which would require estimating the range.
D.1 - ha	ndling data	
D.1.1	Use an appropriate number of significant figures	For example, expressing a correlation coefficient to two or three significant figures.
D.1.2	Find arithmetic means	For example, calculating the means for two conditions using raw data from a class experiment.
D.1.3	Construct and interpret frequency tables and diagrams, bar charts and histograms	For example, selecting and sketching an appropriate form of data display for a given set of data.
D.1.4	Understand simple probability	For example, explaining the difference between the 0.05 and 0.01 levels of significance.
D.1.5	Understand the principles of sampling as applied to scientific data	For example, explaining how a random or stratified sample could be obtained from a target population.

median and mode  mean, median and mode and selecting which measure of central tendency is most appropriate for a given set of data.  Calculate standard deviation  D.1.7  Use a scatter diagram to identify a correlation between two variables  D.1.8  Use a statistical test  D.1.9  Make order of magnitude calculations  Calculations  D.1.10  Distinguish between levels of measurement (nominal, ordinal or interval) that has been used in a study.  D.1.11  Know the characteristics of normal and skewed distributions  D.1.12  Select an appropriate statistical test determine significance  D.1.13  Use statistical tables to determine significance  D.1.14  Understand measures of dispersion, including standard deviation and range version and quantitative data  D.1.15  Understand the differences between qualitative and quantitative data  D.1.16  D.1.17  Understand the difference between primary and secondary data  D.2.1  Understand and use the symbols: =, <, <, >>, ×, ~.  Substitute numerical values into talgebraic equations and range appropriate units for physical quantities  D.2.3  Solve simple algebraic  D.2.3  Solve simple algebraic  D.2.4  Solve simple algebraic  D.2.5  Solve simple algebraic  D.2.6  D.2.6  D.2.7  D.2.7  D.2.8  Solve simple algebraic  D.2.8  D.2.8  D.2.9  Solve simple algebraic  D.2.9  D.2.9  D.2.9  Solve simple algebraic  D.2.1  D.2.2  Solve simple algebraic  D.2.3  D.2.3  D.2.5  Solve simple algebraic  D.2.4  D.2.5  Solve simple algebraic qualtons using appropriate units for physical quantities  D.2.4  D.2.5  D.2.5  D.2.6  D.2.6  D.2.7  D.2.7  D.2.8  D.2.8  D.2.8  D.2.9  D.2.9  D.2.9  D.2.9  D.2.1  D.2.9  Solve simple algebraic  D.2.1  D.2.2  Solve simple algebraic  D.2.3  D.2.3  Solve simple algebraic  D.2.4  D.2.4  D.2.5  D.2.5  D.2.5  Solve simple algebraic  D.2.6  D.2.7  D.2.7  D.2.8  D.2.8  D.2.8  D.2.9  D.2.9  D.2.9  D.2.9  D.2.9  D.2.1  D.2.9  D.2.1  D.2.1  D.2.1  D.2.2  Solve simple algebraic  D.2.3  D.2.4  D.25  D.26  D.27  D.27  D.28  D.28  D.28  D.29  D.29  D.29  D.29  D.20  D.20  D.20  D.20	D.1.6	Understand the terms mean,	For example, explaining the differences between the
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Large number of participants on the basis of the total overall score.			differences using data from a given experiment.
D.1.10   Distinguish between levels of measurement   For example, stating the level of measurement   (nominal, ordinal or interval) that has been used in a study.    D.1.11   Know the characteristics of normal and skewed distributions   For example, being presented with a set of scores from an experiment and being asked to indicate the position of the mean (or median, or mode).    D.1.12   Select an appropriate statistical test   For example, selecting a suitable inferential test for a given practical investigation and explaining why the chosen test is appropriate.    D.1.13   Use statistical tables to determine significance   For example, using an extract from statistical tables to say whether or not a given observed value is significant at the 0.05 level of significance for a one-tailed test.    D.1.14   Understand measures of dispersion, including standard deviation and range   For example, explaining why the standard deviation might be a more useful measure of dispersion for a given set of scores e.g. where there is an outlying score.    D.1.15   Understand the difference between qualitative and quantitative data   For example, explaining how a given qualitative measure (for example, an interview transcript) might be converted into quantitative data.    D.1.16   Understand the difference between primary and secondary data   For example, stating whether data collected by a researcher dealing directly with participants is primary or secondary data.    D.2.1   Understand and use the symbols: =, <, <<, >>, >, ~. *. * * * * * * * * * * * * * * * * *	D.1.9	Make order of magnitude	For example, estimating the mean test score for a
<ul> <li>D.1.10 Distinguish between levels of measurement measurement measurement measurement (nominal, ordinal or interval) that has been used in a study.</li> <li>D.1.11 Know the characteristics of normal and skewed distributions</li> <li>D.1.12 Select an appropriate statistical test (est)</li> <li>D.1.13 Use statistical tables to determine significance</li> <li>D.1.14 Understand measures of dispersion, including standard deviation and range</li> <li>D.1.15 Understand the differences between qualitative data</li> <li>D.1.16 Understand the difference between primary and secondary data</li> <li>D.2 - algebra</li> <li>D.2.1 Understand and use the symbols: =, &lt;, &lt;, &gt;, &gt;, &gt;, ∞, ∞.</li> <li>D.2.2 Substitute numerical values into algebraic equatities</li> <li>D.2.3 Solve simple algebraic</li> <li>For example, explaining the level of measurement (nominal, ordinal or interval) that has been used in a study.</li> <li>For example, being presented with a set of scores from an experiment and being asked to indicate the position of the mean (or median, or mode).</li> <li>For example, selecting a suitable inferential test for a given practical investigation and explaining why the chosen test is appropriate.</li> <li>For example, using an extract from statistical tables to say whether or not a given observed value is significant at the 0.05 level of significance for a one-tailed test.</li> <li>For example, explaining why the standard deviation might be a more useful measure of dispersion for a given set of scores e.g. where there is an outlying score.</li> <li>For example, explaining how a given qualitative measure (for example, an interview transcript) might be converted into quantitative data.</li> <li>For example, stating whether data collected by a researcher dealing directly with participants is primary or secondary data.</li> <li>For example, expressing the outcome of an inferential test in the conventional form by stating the level of signif</li></ul>		calculations	large number of participants on the basis of the total
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		quantities	into the Chi Square formula.
equations a Chi Square test.	D.2.3	Solve simple algebraic	For example, calculating the degrees of freedom for
		equations	a Chi Square test.

D.3 - graphs		
D.3.1	Translate information between graphical, numerical and algebraic forms	For example, using a set of numerical data (a set of scores) from a record sheet to construct a bar graph.
D.3.2	Plot two variables from experimental or other data	For example, sketching a scatter diagram using two sets of data from a correlational investigation.

# 5e. Risk Assessment and Management

In UK law, health and safety is primarily the responsibility of the employer. In a school or college the employer could be a local education authority, the governing body or board of trustees. Employees, (teachers/lecturers, technicians etc), have a legal duty to cooperate with their employer on health and safety matters.

Useful advice for education establishments on the requirements for risk assessment can be found at <a href="http://www.hse.gov.uk/services/education/index.htm">http://www.hse.gov.uk/services/education/index.htm</a>

There is no specific legal requirement that detailed risk assessment forms should be completed for each practical activity, although a minority of employers may require this.

# 5f. Core study references (Component 02)

# Social

Milgram, S. (1963) Behavioural study of obedience. *Journal of Abnormal and Social Psychology*, 67, (4), 371–378.

Bocchiaro, P., Zimbardo, P. G. & van Lange, P. A. M. (2012) To defy or not to defy: An experimental study of the dynamics of disobedience and whistle-blowing. *Social Influence*, 7, (1), 35–50.

Piliavin, I. M., Rodin, J., & Piliavin, J. A. (1969), Good Samaritanism: An underground phenomenon? *Journal of Personality and Social Psychology*, 13, (4) 289–299.

Levine, R. V, Norenzayan, A. & Philbrick, K. (2001) Cross-cultural differences in helping strangers. *Journal of Cross-cultural Psychology*, 32, (5), 543–560.

# Cognitive

Moray, N. (1959) Attention in dichotic listening: Affective cues and the influence of instructions. *Quarterly Journal of Experimental Psychology*, 11, (1), 56–60.

Simons, D.J. & Chabris, C.F. (1999) Gorillas in our midst: sustained inattentional blindness for dynamic events. *Perception*, 28, 1059–1074.

Loftus, E. F. & Palmer, J. C. (1974) Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13, (5) 585–589.

Grant, H. M., Lane, C. Bredahl, J. C., Clay. J., Ferrie, J., Groves, J. E., McDorman, T. A. & Dark, V. J. (1998) Context-dependent memory for meaningful material: Information for students. *Applied Cognitive Psychology*, 12, (6), 617–623.

# Developmental

Bandura, A., Ross, D. & Ross, S. A. (1961) Transmission of aggression through imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 63, (3), 575–582.

Chaney, G., Clements, B., Landau, L., Bulsara, M. & Watt, P. (2004) A new asthma spacer device to improve compliance in children: a pilot study. *Respirology*, 9, (4), 499–506.

Kohlberg, L. (1968) The child as a moral philosopher. Psychology Today, 2, (4), 25–30.

Lee, K., Cameron, C. A., Xu, F., Fu, G., & Board, J. (1997). Chinese and Canadian children's evaluations of lying and truth-telling. *Child Development*, 64, (5), 924–934.

# **Biological**

Sperry, R. W. (1968) Hemisphere deconnection and unity in conscious awareness. *American Psychologist*, 23, 723–733.

Casey, B. J., Somerville, L. H., Gotlib, I. H., Ayduk, O., Franklin, N. T., Askren, M. K., Jonides, J., Berman, M., Wilson, N., Teslovich, T., Glover, G., Zayas, V., Mischel, W. & Shoda, Y. (2011) Behavioural and neural correlates of delay of gratification 40 years later. *Proceedings of the National Academy of Sciences of the United States of America*, 108, (36), 14998–15003.

Blakemore, C. & Cooper, G.F. (1970) Development of the brain depends on the visual environment. *Nature*, 228, 477–478.

Maguire, E. A., Gadian, D. G., Johnsrude, I. S., Good, C. D., Ashburner, J., Frackowiak, R. S. & Frith, C. D. (2000) Navigation-related structural change in the hippocampi of taxi-drivers. *Proceedings of the National Academy of Sciences of the United States of America*, 97, (8), 4398 – 4403.

# Individual differences

Freud, S. (1909) Analysis of a phobia of a five-year-old boy. *The Pelican Freud Library*, (1997) Vol. 8, Case Histories, p. 169–306.

Baron-Cohen, S., Jolliffe, T., Mortimore, C. & Robertson, M. (1997) Another advanced test of theory of mind: evidence from very high functioning adults with autism or Asperger Syndrome. *Journal of Child Psychology and Psychiatry*, 38, 813–822.

Gould, S. J. (1982) A nation of morons. New Scientist, 6 349 - 352

Hancock, J., Woodworth, M. & Porter, S. (2011) Hungry like the wolf: a word-pattern analysis of the language of psychopaths. *Legal and Criminological Psychology*, 18, (1), 102–114.

# 5g. Applied psychology references (Component 03)

# Section A: Issues in mental health

Rosenhan, D. L. (1973) On being sane in insane places. Science, Vol 179, (4070), 250-258.

Gottesman, I. I., Laursen, T. M., Bertelsen, A. & Mortensen, P. B. (2010) Severe mental disorders in offspring with 2 psychiatrically ill parents. *Archives of General Psychiatry*, 67, 252–257.

Szasz, T. (2011) The myth of mental illness: 50 years later. The Psychiatrist, 35, 179–182.

# Section B: Option 1 Child psychology

Van Leeuwen, M., Van den Berg, S. M. & Boomsma, D. (2008) A twin-family study of general IQ. *Learning and Individual Differences*, 18, 76–88.

Barkley-Levenson, E. & Galván, A. (2014) Neural representation of expected value in the adolescent brain. *Proceedings of the National Academy of Sciences of the United States of America*, 111,1646–1651.

Gibson, E. J. & Walk, P. D. (1960) The visual cliff. Scientific American, 202, (4), 64–71.

Wood, D., Bruner, J.S. & Ross, G. (1976) The role of tutoring in problem-solving. *Journal of Child Psychology and Psychiatry*, 17, (2), 89–100.

Ainsworth, M. D. S. & Bell, S. (1970) Attachment, Exploration and Separation: Illustrated by the Behavior of One-year-olds in a Strange Situation. *Child Development*, 41, (1), 49–67.

Johnson, F. L. & Young, K. (2002) Gendered voices in children's advertising. *Critical Studies in Media Communication*. 19, (4), 461–480.

# Section B: Option 2 Criminal psychology

Raine, A., Buchsbaum, M., & LaCasse, L. (1997) Brain abnormalities in murderers indicated by positron emission tomography. *Biological Psychiatry*, 42, (6), 495–508.

Hall, L. J. & Player, E. (2008) Will the introduction of an emotional context affect fingerprint analysis and decision-making? *Forensic Science International*, 181, (1), 36–39.

Memon, A. & Higham, P. A. (1999) A review of the cognitive interview. *Psychology, Crime and Law,* 5, (1-2), 177 – 196.

Dixon, J.A., Mahoney, B., Cocks, R. (2002). Accents of Guilt Effects of Regional Accent, race, and Crime Type on Attributions of Guilt. *Journal of Language and Social Psychology*, 21(2), 162-168.

Wilson, J. Q. & Kelling, G. L. (1982) The police and neighbourhood safety: Broken windows. *Atlantic Monthly*, 127, 29–38.

Haney, C., Banks, W. C. & Zimbardo, P. G. (1973) Study of prisoners and guards in a simulated prison. *Naval Research Reviews*, 9, 1–17.

# Section B: Option 3 Environmental psychology

Black, D. A. & Black, J. A. (2007) Aircraft noise exposure and resident's stress and hypertension: A public health perspective for airport environmental management. *Journal of Air Transport Management* 13, (5), 264–276.

Czeisler, C. A., Moore-Ede, M. C. & Coleman, R. H. (1982) Rotating shift work schedules that disrupt sleep are improved by applying circadian principles. *Science*, 217, (4558), 460–463.

Lord, K. R. (1994) Motivating recycling behaviour: A quasi-experimental investigation of message and source strategies. *Psychology & Marketing*, 11, (4), 341–358.

Drews, F. A. & Doig, A. (2014) Evaluation of a configural vital sign display for intensive care unit nurses. *The Journal of Human Factors and Ergonomics Society.* 56 (3), 569–580.

Ulrich, R. S. (1984) View through a window may influence recovery from surgery. *Science, New Series*, 224, (4647), 420–421.

Wells, M. M. (2000) Office clutter or meaningful personal displays: The role of office personalization in employee and organizational well-being. *Journal of Environmental Psychology*, 20, (3), 239–255.

# Section B: Option 4 Sport and exercise psychology

Fazey, J. & Hardy, L. (1988) The inverted-U hypothesis: A catastrophe for sport psychology. British Association of Sports Sciences Monograph, No. 1, Leeds: The National Coaching Foundation.

Lewis, C., Annett, L., Davenport, S., Hall, A. & Lovatt, P. (2014) Mood changes following social dance sessions in people with Parkinson's Disease. *Journal of Health Psychology.* 19, (4).

Munroe-Chandler, K., Hall, C. & Fishburne, G. (2008) Playing with confidence: the relationship between imagery use and self-confidence and self-efficacy in youth soccer players. *Journal of Sports Science*. 26, (14), 1539–1546.

Kroll, W. & Crenshaw, W. (1970) Multivariate personality profile analysis of four athletic groups. *Contemporary psychology of sport*, 97–106.

Smith, R. E., Smoll, F. L. & Curtis, B. (1979) Coach effectiveness training: a cognitive-behavioural approach to enhancing relationship skills in youth sports coaches. *Journal of Sport Psychology*, 1, (1), 59–75.

Zajonc, R. B., Heingartner, A. & Herman, E. M. (1969) Social enhancement and impairment of performance in the cockroach. *Journal of Personality and Social Psychology*. 13, (2), 83–92.