

Name

**Myton School
Psychology Department**



**A Level
Psychology Handbook
2023 - 2025**

Introduction

First of all, welcome to the Psychology Department.

Secondly, well done for selecting Psychology as an area of study- Whatever the reasons for your choice I hope that you enjoy this course and you gain much knowledge and pleasure from it.

Psychology is a popular choice among students, it is the science of the mind.

This document contains all the information that you need to know regarding your course- It contains (amongst other things) information on exam boards, syllabus areas, curriculum content, and a comprehensive reading list to support your lessons.

Please do keep this document safe, it should be kept at the front of your folder and be with you for every lesson. If you have any questions regarding Psychology, the course or Sixth Form issues in general we can be contacted during class time or via email.

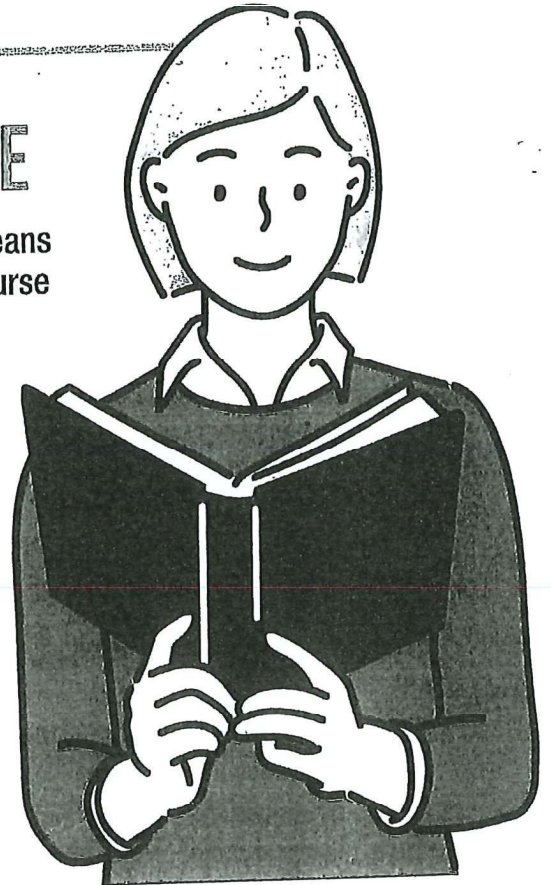
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INTRODUCTION TO THE COURSE

AQA A-Level Psychology is a linear qualification, which means that you will sit all the exams at the end of the A-Level course (normally after two years of study).

The topics you will study include:

- 1 Social influence
- 2 Memory
- 3 Attachment
- 4 Psychopathology
- 5 Approaches in Psychology
- 6 Biopsychology
- 7 Research Methods
- 8 Issues and Debates in Psychology



Option 1

Relationships, Gender or Cognition and Development

Option 2

Schizophrenia, Eating Behaviour, or Stress

Option 3

Forensic Psychology, Aggression, or Addiction

How will I be Assessed?

You will be assessed across three exam papers:

Paper	What is assessed?	Assessed	Questions
Paper 1: introductory Topics in Psychology	Compulsory content 1-4 above	Written exam: 2 hours 96 marks in total 33.3% of A-Level	Sections A/B/C/D: Multiple choice, short answer and extended writing (24 marks each)
Paper 2: Psychology in Context	Compulsory content 5-7 above	Written exam: 2 hours 96 marks in total 33.3% of A-Level	Sections A/B: multiple choice, short answer and extended writing. (24 marks each) Section C: multiple choice, short answer and extended writing. (48 marks)
Paper 3: Issues and Options in Psychology	Compulsory content 8 above Optional content, one from option 1, one from option 2, one from option 3 above	Written exam: 2 hours 96 marks in total 33.3% of A-Level	Sections A/B/C/D: multiple choice, short answer and extended writing. (24marks each)

PAPER 1 INTRODUCTORY TOPICS IN PSYCHOLOGY

1 Social influence

- Types of conformity: internalisation, identification and compliance. Explanations for conformity: informational social influence and normative social influence, and variables affecting conformity including group size, unanimity and task difficulty as investigated by Asch.
- Conformity to social roles as investigated by Zimbardo.
- Explanations for obedience: agentic state and legitimacy of authority, and situational variables affecting obedience including proximity, location and uniform, as investigated by Milgram. Dispositional explanation for obedience: the Authoritarian Personality.
- Explanations of resistance to social influence, including social support and locus of control.
- Minority influence including reference to consistency, commitment and flexibility.
- The role of social influence processes in social change.

2 Memory

- The multi-store model of memory: sensory register, short-term memory and long-term memory. Features of each store: coding, capacity and duration.
- Types of long-term memory: episodic, semantic, procedural.
- The working memory model: central executive, phonological loop, visuo-spatial sketchpad and episodic buffer. Features of the model: coding and capacity.
- Explanations for forgetting: proactive and retroactive interference and retrieval failure due to absence of cues.
- Factors affecting the accuracy of eyewitness testimony: misleading information, including leading questions and post-event discussion; anxiety.
- Improving the accuracy of eyewitness testimony, including the use of the cognitive interview.

3 Attachment

- Caregiver-infant interactions in humans: reciprocity and interactional synchrony. Stages of attachment identified by Schaffer. Multiple attachments and the role of the father.
- Animal studies of attachment: Lorenz and Harlow.
- Explanations of attachment: learning theory and Bowlby's monotropic theory. The concepts of a critical period and an internal working model.
- Ainsworth's 'Strange Situation'. Types of attachment: secure, insecure-avoidant and insecure-resistant. Cultural variations in attachment, including van Ijzendoorn.
- Bowlby's theory of maternal deprivation. Romanian orphan studies: effects of institutionalisation.
- The influence of early attachment on childhood and adult relationships, including the role of an internal working model.

4 Psychopathology

- Definitions of abnormality, including deviation from social norms, failure to function adequately, statistical infrequency and deviation from ideal mental health.
- The behavioural, emotional and cognitive characteristics of phobias, depression and obsessive-compulsive disorder (OCD).
- The behavioural approach to explaining and treating phobias: the two-process model, including classical and operant conditioning; systematic desensitisation, including relaxation and use of hierarchy; flooding.
- The cognitive approach to explaining and treating depression: Beck's negative triad and Ellis's ABC model; cognitive behaviour therapy (CBT), including challenging irrational thoughts.
- The biological approach to explaining and treating OCD: genetic and neural explanations; drug therapy.

PAPER 2 PSYCHOLOGY IN CONTEXT

5 Approaches in Psychology

- Origins of Psychology: Wundt, introspection and the emergence of Psychology as a science.

The basic assumptions of the following approaches:

- Learning approaches: the behaviourist approach, including classical conditioning and Pavlov's research, operant conditioning, types of reinforcement and Skinner's research; social learning theory including imitation, identification, modelling, vicarious reinforcement, the role of mediational processes and Bandura's research.
- The cognitive approach: the study of internal mental processes, the role of schema, the use of theoretical and computer models to explain and make inferences about mental processes. The emergence of cognitive neuroscience.
- The biological approach: the influence of genes, biological structures and neurochemistry on behaviour. Genotype and phenotype, genetic basis of behaviour, evolution and behaviour.
- The psychodynamic approach: the role of the unconscious, the structure of personality, that is Id, Ego and Super ego, defence mechanisms including repression, denial and displacement, psychosexual stages.
- Humanistic Psychology: free will, self-actualisation and Maslow's hierarchy of needs, focus on the self, congruence, the role of conditions of worth. The influence on counselling Psychology.
- Comparison of approaches.

6 Biopsychology

- The divisions of the nervous system: central and peripheral (somatic and autonomic).
- The structure and function of sensory, relay and motor neurons. The process of synaptic transmission, including reference to neurotransmitters, excitation and inhibition.
- The function of the endocrine system: glands and hormones.
- The fight or flight response including the role of adrenaline
- Localisation of function in the brain and hemispheric lateralisation: motor, somatosensory, visual, auditory and language centres; Broca's and Wernicke's areas, split brain research.
- Plasticity and functional recovery of the brain after trauma.
- Ways of studying the brain: scanning techniques, including functional magnetic resonance imaging (fMRI); electroencephalogram (EEGs) and event-related potentials (ERPs); post-mortem examinations.
- Biological rhythms: circadian, infradian and ultradian and the difference between these rhythms. The effect of endogenous pacemakers and exogenous zeitgebers on the sleep/wake cycle.

7 Research Methods

Students should demonstrate knowledge and understanding of the following research methods, scientific processes and techniques of data handling and analysis, be familiar with their use and be aware of their strengths and limitations.

- Experimental method. Types of experiment, laboratory and field experiments; natural and quasi-experiments.
- Observational techniques. Types of observation: naturalistic and controlled observation; covert and overt observation; participant and non-participant observation.
- Self-report techniques. Questionnaires; interviews, structured and unstructured.
- Correlations. Analysis of the relationship between co-variables. The difference between correlations and experiments.
- Content analysis.
- Case studies.

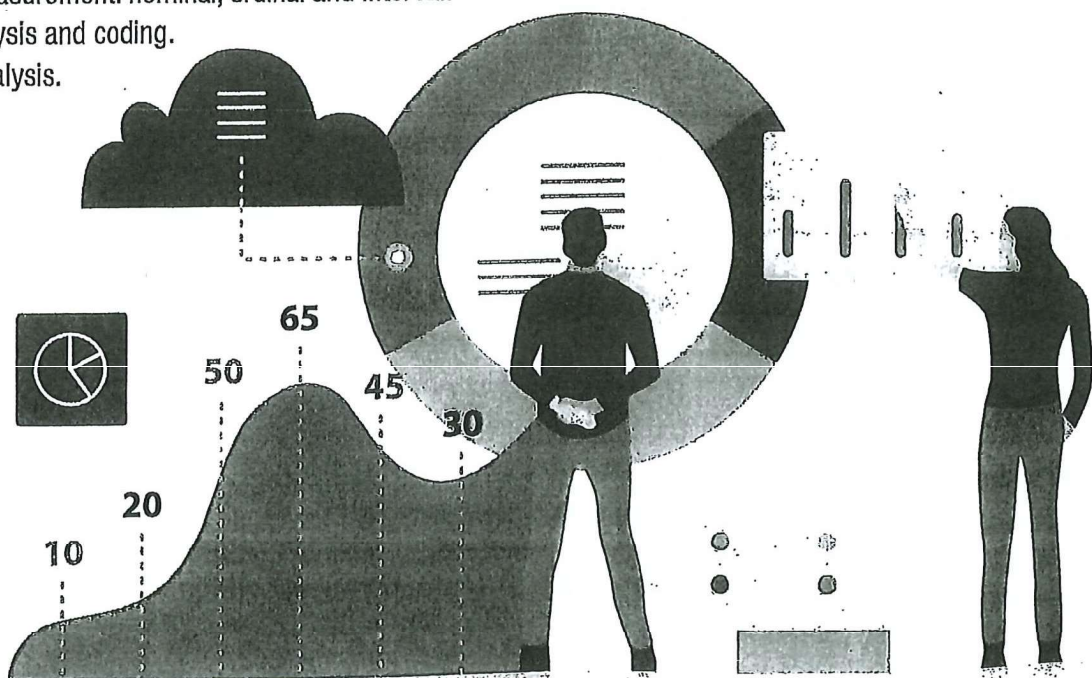
7.1 Scientific process

- Aims: stating aims, the difference between aims and hypotheses.
- Hypotheses: directional and non-directional. Sampling: the difference between population and sample; sampling techniques including: random, systematic, stratified, opportunity and volunteer; implications of sampling techniques, including bias and generalisation.

- Pilot studies and the aims of piloting.
- Experimental designs: repeated measures, independent groups, matched pairs.
- Observational design: behavioural categories; event sampling; time sampling.
- Questionnaire construction, including use of open and closed questions; design of interviews.
- Variables: manipulation and control of variables, including independent, dependent, extraneous, confounding; operationalisation of variables.
- Control: random allocation and counterbalancing, randomisation and standardisation.
- Demand characteristics and investigator effects.
- Ethics, including the role of the British Psychological Society's code of ethics; ethical issues in the design and conduct of psychological studies; dealing with ethical issues in research.
- The role of peer review in the scientific process.
- The implications of psychological research for the economy.
- Reliability across all methods of investigation. Ways of assessing reliability: test-retest and inter-observer; improving reliability.
- Types of validity across all methods of investigation: face validity, concurrent validity, ecological validity and temporal validity. Assessment of validity. Improving validity.
- Features of science: objectivity and the empirical method; replicability and falsifiability; theory construction and hypothesis testing; paradigms and paradigm shifts.
- Reporting psychological investigations. Sections of a scientific report: abstract, introduction, method, results, discussion and referencing.

7.2 Data Handling and Analysis

- Quantitative and qualitative data; the distinction between qualitative and quantitative data collection techniques.
- Primary and secondary data, including meta-analysis.
- Descriptive statistics: measures of central tendency – mean, median, mode; calculation of mean, median and mode; measures of dispersion; range and standard deviation; calculation of range; calculation of percentages; positive, negative and zero correlations.
- Presentation and display of quantitative data: graphs, tables, scattergrams, bar charts, histograms.
- Distributions: normal and skewed distributions; characteristics of normal and skewed distributions.
- Analysis and interpretation of correlation, including correlation coefficients.
- Levels of measurement: nominal, ordinal and interval.
- Content analysis and coding.
- Thematic analysis.



7.3 Inferential Testing

Students should demonstrate knowledge and understanding of inferential testing and be familiar with the use of inferential tests.

- Introduction to statistical testing; the sign test.
- Probability and significance: use of statistical tables and critical values in interpretation of significance; Type I and Type II errors.
- Factors affecting the choice of statistical test, including level of measurement and experimental design. When to use the following tests: Spearman's rho, Pearson's r, Wilcoxon, Mann-Whitney, related t-test, unrelated t-test and Chi-Squared test.

PAPER 3 ISSUES AND OPTIONS IN PSYCHOLOGY

8 Issues and Debates in Psychology

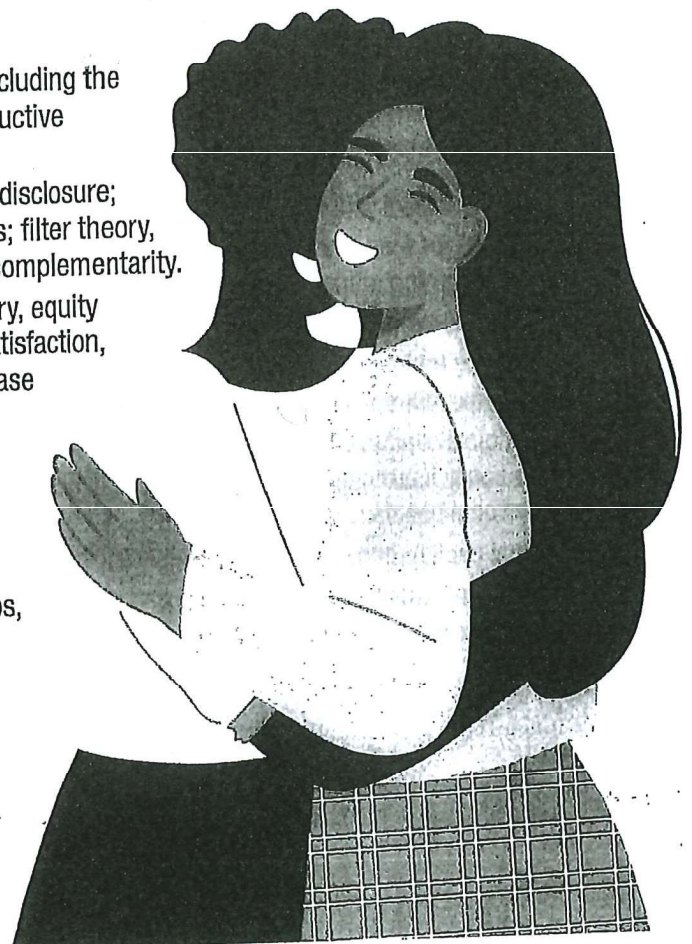
- Gender and culture in Psychology – universality and bias. Gender bias including androcentrism and alpha and beta bias; cultural bias, including ethnocentrism and cultural relativism.
- Free will and determinism: hard determinism and soft determinism; biological, environmental and psychic determinism. The scientific emphasis on causal explanations.
- The nature-nurture debate: the relative importance of heredity and environment in determining behaviour; the interactionist approach.
- Holism and reductionism: levels of explanation in Psychology. Biological reductionism and environmental (stimulus-response) reductionism.
- Idiographic and nomothetic approaches to psychological investigation.
- Ethical implications of research studies and theory, including reference to social sensitivity.



Tip: From now, highlight the options which your college/school has chosen

9 Option – Relationships

- The evolutionary explanations for partner preferences, including the relationship between sexual selection and human reproductive behaviour.
- Factors affecting attraction in romantic relationships: self-disclosure; physical attractiveness, including the matching hypothesis; filter theory, including social demography, similarity in attitudes and complementarity.
- Theories of romantic relationships: social exchange theory, equity theory and Rusbult's investment model of commitment, satisfaction, comparison with alternatives and investment. Duck's phase model of relationship breakdown: intra-psychic, dyadic, social and grave dressing phases.
- Virtual relationships in social media: self-disclosure in virtual relationships; effects of absence of gating on the nature of virtual relationships.
- Parasocial relationships: levels of parasocial relationships, the absorption addiction model and the attachment theory explanation.



10 Option – Gender

- Sex and gender. Sex-role stereotypes. Androgyny and measuring androgyny including the Bem Sex Role Inventory.
- The role of chromosomes and hormones (testosterone, oestrogen and oxytocin) in sex and gender. Atypical sex chromosome patterns: Klinefelter's syndrome and Turner's syndrome.
- Cognitive explanations of gender development, Kohlberg's theory, gender identity, gender stability and gender constancy; gender schema theory.
- Psychodynamic explanation of gender development, Freud's psychoanalytic theory, Oedipus complex; Electra complex; identification and internalisation.
- Social learning theory as applied to gender development. The influence of culture and media on gender roles.
- Atypical gender development: gender dysphoria; biological and social explanations for gender dysphoria.

11 Option – Cognition and Development

- Piaget's theory of cognitive development: schemas, assimilation, accommodation, equilibration, stages of intellectual development. Characteristics of these stages, including object permanence, conservation, egocentrism and class inclusion.
- Vygotsky's theory of cognitive development, including the zone of proximal development and scaffolding.
- Baillargeon's explanation of early infant abilities, including knowledge of the physical world; violation of expectation research.
- The development of social cognition: Selman's levels of perspective-taking; theory of mind, including theory of mind as an explanation for autism; the Sally-Anne study. The role of the mirror neuron system in social cognition.

12 Option – Schizophrenia

- Classification of schizophrenia. Positive symptoms of schizophrenia, including hallucinations and delusions. Negative symptoms of schizophrenia, including speech poverty and avolition. Reliability and validity in diagnosis and classification of schizophrenia, including reference to co-morbidity, culture and gender bias and symptom overlap.
- Biological explanations for schizophrenia: genetics and neural correlates, including the dopamine hypothesis.
- Psychological explanations for schizophrenia: family dysfunction and cognitive explanations, including dysfunctional thought processing.
- Drug therapy: typical and atypical antipsychotics.
- Cognitive behaviour therapy and family therapy as used in the treatment of schizophrenia. Token economies as used in the management of schizophrenia.
- The importance of an interactionist approach in explaining and treating schizophrenia; the diathesis-stress model.

13 Option – Eating Behaviour

- Explanations for food preferences: the evolutionary explanation, including reference to neophobia and taste aversion; the role of learning in food preference, including social and cultural influences.
- Neural and hormonal mechanisms involved in the control of eating behaviour, including the role of the hypothalamus, ghrelin and leptin.
- Biological explanations for anorexia nervosa, including genetic and neural explanations.
- Psychological explanations for anorexia nervosa: family systems theory, including enmeshment, autonomy and control; social learning theory, including modelling, reinforcement and media; cognitive theory, including distortions and irrational beliefs.
- Biological explanations for obesity, including genetic and neural explanations.
- Psychological explanations for obesity, including restraint theory, disinhibition and the boundary model. Explanations for the success and failure of dieting.

14 Option – Stress

- The physiology of stress, including general adaptation syndrome, the hypothalamic pituitary-adrenal system, the sympathomedullary pathway and the role of cortisol.
- The role of stress in illness, including reference to immunosuppression and cardiovascular disorders.
- Sources of stress: life changes and daily hassles. Workplace stress, including the effects of workload and control.
- Measuring stress: self-report scales (Social Readjustment Ratings Scale and Hassles and Uplifts Scale) and physiological measures, including skin conductance response.
- Individual differences in stress: personality types A, B and C and associated behaviours; hardiness, including commitment, challenge and control.
- Managing and coping with stress: drug therapy (benzodiazepines, beta blockers), stress inoculation therapy and biofeedback. Gender differences in coping with stress. The role of social support in coping with stress; types of social support, including instrumental, emotional and esteem support.

15 Option – Aggression

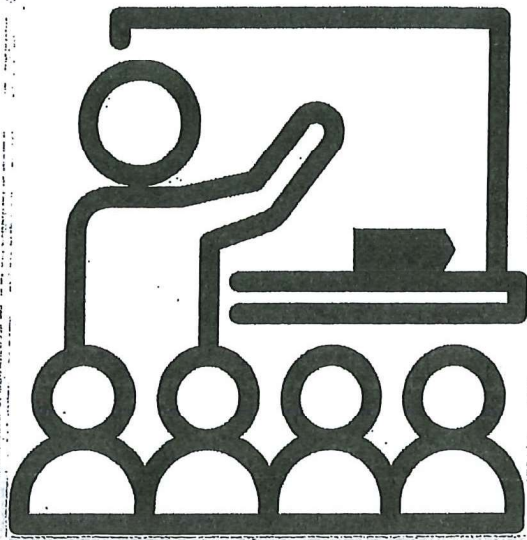
- Neural and hormonal mechanisms in aggression, including the roles of the limbic system, serotonin and testosterone. Genetic factors in aggression, including the MAOA gene.
- The ethological explanation of aggression, including reference to innate releasing mechanisms and fixed action patterns. Evolutionary explanations of human aggression.
- Social psychological explanations of human aggression, including the frustration-aggression hypothesis, social learning theory as applied to human aggression, and de-individualisation.
- Institutional aggression in the context of prisons: dispositional and situational explanations.
- Media influences on aggression, including the effects of computer games. The role of desensitisation, disinhibition and cognitive priming.

16 Option – Forensic Psychology

- Offender profiling: the top-down approach, including organised and disorganised types of offender; the bottom-up approach, including Investigative Psychology; geographical profiling.
- Biological explanations of offending behaviour: an historical approach (atavistic form); genetics and neural explanations.
- Psychological explanations of offending behaviour: Eysenck's theory of the criminal personality; cognitive explanations; level of moral reasoning and cognitive distortions, including hostile attribution bias and minimalisation; differential association theory; psychodynamic explanations.
- Dealing with offending behaviour: the aims of custodial sentencing and the psychological effects of custodial sentencing. Recidivism. Behaviour modification in custody. Anger management and restorative justice programmes.

17 Option – Addiction

- Describing addiction: physical and psychological dependence, tolerance and withdrawal syndrome.
- Risk factors in the development of addiction, including genetic vulnerability, stress, personality, family influences and peers.
- Explanations for nicotine addiction: brain neurochemistry, including the role of dopamine, and learning theory as applied to smoking behaviour, including reference to cue reactivity.
- Explanations for gambling addiction: learning theory as applied to gambling, including reference to partial and variable reinforcement; cognitive theory as applied to gambling, including reference to cognitive bias.
- Reducing addiction: drug therapy; behavioural interventions, including aversion therapy and covert sensitisation; cognitive behaviour therapy.
- The application of the following theories of behaviour change to addictive behaviour; the theory of planned behaviour and Prochaska's six-stage model of behaviour change.



IN THE CLASSROOM

A successful Psychology student:



Brings their well-organised folder to every lesson.



Is engaged and participates in lessons in a purposeful way.



Keeps their phone in their bag, unless directed otherwise by a member of staff.



Keeps up to date with their A3 sheets/own notes and hands them in for checking.



Completes their homework by the due date and has it with them to hand in.



OUTSIDE THE CLASSROOM

A successful Psychology student:



Informs their teacher if they are going to be absent.



Is proactive if they find aspects of the course difficult, eg they will talk to their teacher, attend drop-in sessions, etc.



Makes sure they are up to date with any work missed **BEFORE** their next lesson (where possible).



Works independently, eg they read around the subject, complete past exam questions, learn new vocab, consolidate notes taken in the lesson, etc.

WHAT HAPPENS IF...



...a Psychology student:
doesn't meet these
expectations?

1

They will get a reminder
from their teacher.

2

They will get a reminder from the
Head of Department (who may also
contact form tutors and home) with
clear actions for how the situation
can be resolved.

3

They will be invited to a meeting
with the Head of Year and/or Head
of Sixth Form.

ADDITIONAL INFORMATION

1. Textbooks

You have access to an online textbook.

You will need to access this via the following link:

Year 1

<https://illuminate.digital/aqapsych2edy1>

Student Username: SMYTONSCHOOL7

Student Password: GREEN7

Year 2

<https://illuminate.digital/aqapsych2>

Student Username: SMYTON2

Student Password: STUDENT2

2. Folders

You are required to keep an organised set of notes. Due to the amount of notes and resources you will use during the year you are required to use a lever arch file and dividers to organise your studies- This should be brought to every Psychology lesson you have. At least once per half term we will be performing spot checks on your folders- The list below is the order for your folder:

- 1) Student hand book
- 2) Specification card at the front of each topic
- 3) Topic notes separated by dividers and notes in order
- 4) Exam question booklet (per topic)

ADDITIONAL INFORMATION

3. Marking Policy

○ Marking and assessment can take the form of teacher, self and peer assessment

○ Feedback - May be grades or marks and could be individual or whole class, verbal or written. However, your actions for improvement are essential. You should know these and discuss with your teacher.

○ Frequency - Each student can expect to receive specific individual feedback (FAR marking) approximately every 8—10 Lessons- This be from- either or both members of staff and give an indication of the student's current level of attainment.

You will receive a comment from your teacher and specific actions- These actions will be personalised and clear to help you extend your learning. You will be expected to respond to this feedback and complete the actions outlined by your teacher.

○ Marking time scale - staff will aim to give feedback within 2 weeks of an assessment

○ Marks will be kept as a central record to assist with target setting, assessment and parent's evenings. Students will also be expected to record their marks on their assessment tracker- They will also be expected to set their own targets for improvement.

○ In essays the following annotations will be used -

Sp - spelling error

P - punctuation error

0 - circle a missing/incorrect capital letter

ADDITIONAL INFORMATION

4. Horne Learning

Expectations:

Reflection:

We expect that all students reflect on their learning from the lesson and prepare themselves for their next Psychology lesson- Examples of suitable reflection activities include:

Reading through work from the lesson and highlighting all the things NEWLY learned

Writing a glossary of NEWLY learned terminology

Producing a summary of the key learning points from the lesson

Talking to parents/carers about the things they have learnt in the lesson

Preparing for the next lesson by reading around the topic

Horne Learning Activities:

You will also be set specific home learning activities via SatchelOne in addition to reflection activities: These may include;

Completion of notes

Completion of past exam questions including essays

Preparation for timed essays/assessments

The home learning tasks will be marked/monitored as appropriate by your class teacher in accordance with the departments marking policy.

5. Directed Study

In addition to home learning activities, we will ask you to identify one study period per week that will be dedicated to the consolidation of previously covered content- You will be set weekly tasks to complete during this study period.

Assessment objectives and other things

Skills and assessment objectives

A *skill* is an ability to do something, such as kick a ball or describe your knowledge of the multi-store model of memory.

But there is more to knowledge than description. There is the further skill of being able to use your knowledge in new situations (applying your knowledge).

And a further skill is to be able to judge the value of your knowledge (evaluation).

All three of these skills are part of your studies.

An *assessment objective* is a statement of how these skills are assessed!

AOs are assessment objectives, i.e. how the exam assesses what you know.

AO1 (assessment objective 1) aims to assess your knowledge and understanding of psychological concepts and theories.

AO2 (assessment objective 2) aims to assess your application of your knowledge.

AO3 (assessment objective 3) aims to assess your ability to evaluate your knowledge.

Here is an exam question:

Describe the multi-store model of memory. [4 marks]

How do you know whether to do AO1, AO2 or AO3 in this question?

In this case the command word *Describe* tells you to 'do AO1'.

Command words

This is the list of command words and their definitions, provided by AQA.

I have highlighted the most common terms used for **AO1** and **AO3** questions. AO2 questions use many different command words but are obvious from the form of the question (see page 68).

From: tinyurl.com/yx7jqjy5

- Analyse** Separate information into components and identify their characteristics.
- Calculate** Work out the value of something.
- Choose** Select from a range of alternatives.
- Comment** Present an informed opinion.
- Compare** Identify similarities and/or differences.
- Complete** Finish a task by adding to given information.
- Consider** Review and respond to given information.
- Describe** Give an account of.
- Design** Set out how something will be done.
- Discuss** Present key points about different ideas or strengths and weaknesses of an idea.
- Distinguish** Explain ways in which two things differ. Provide detail of characteristics that enable a person to know the difference between...
- Draw** Produce a diagram.
- Evaluate** Judge from available evidence.
- Explain** Set out purposes or reasons.
- Explain how** Give a detailed account of a process or way of doing something.
- Explain why** Give a detailed account of reasons in relation to a particular situation.
- Give** Produce an answer from recall or from given information.
- Identify** Name or otherwise characterise.
- Justify** Provide reasons, reasoned argument to support, possibly provide evidence.
- Label** Provide appropriate names on a diagram.
- Name** Identify using a recognised technical term.
- Outline** Set out main characteristics.
- Select** Choose or pick out from alternatives.
- State** Express in clear terms.
- Suggest** Present a possible case/solution.
- Write** Give a definition.
- Which is** Select from alternatives.
- Write** Provide information in verbatim form.

The command words used by AQA are shown on the left, along with AQA's definitions.

The most commonly used command words are:

Describe	AO1	Present knowledge and understanding.
Discuss	AO1 AO3	Basically the same as 'describe and evaluate', but 'discuss' suggests that you might compare differing views and reach a decision.
Compare	AO3	An AO3 term – look at similarities and differences.
Evaluate	AO3	Consider strengths and limitations, including real-world applications, comparisons with other theories, etc.
Explain how/why	AO1 AO2 AO3	'Explain' means more than 'describe' – your teacher might recite a definition of a psychological term but then <i>explain</i> it by giving an example. If application is required there will be a stem (scenario).
Identify/Name	AO1 AO2 AO3	Usually 1 mark but question may include 'and explain'. If that is the case, don't forget to identify or name the thing.
Outline	AO1	Describe something but in a more sketchy way – less breadth and a bit less depth. Think of the difference between drawing an outline of a person's face and drawing their face.
What is meant by	AO1	Define a term – helps to add an example.

Number of marks and timing

The number of marks in a question tells you how much to write and how long to spend on your answer.

AS level exams

- 72 marks for each paper and 90 minutes.
- 90 divided by 72 = 1¼ minutes per mark.

A level exams

- 96 marks for each paper and 120 minutes.
- 120 divided by 96 = 1¼ minutes per mark.

The calculation on the left gives you a sense of how much time you should spend on each exam question ... just over a minute per mark.

But don't forget that this timing is not just about time spent writing – you should spend time reading the question and thinking (and even rereading your answer).

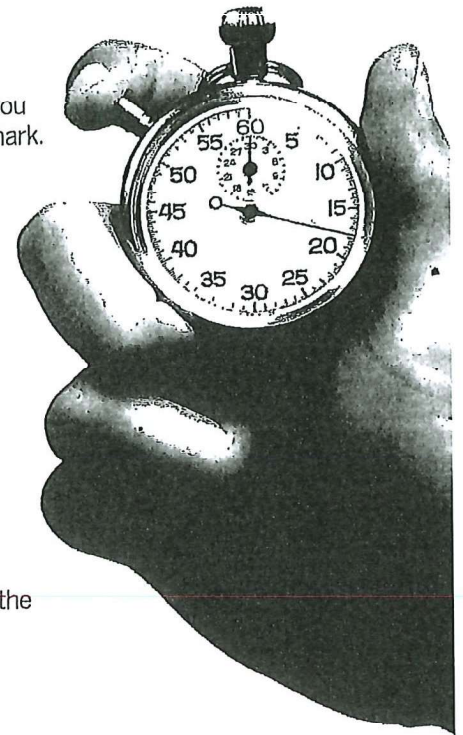
So work on the idea of writing a minute per mark plus time for thinking/planning, for example:

For a 4-mark question you have 4 minutes' writing time and about 1 minute thinking/planning time.

For a 12-mark question you have 12 minutes' writing time and about 3 minutes' thinking/planning time.

For a 16-mark question you have 16 minutes' writing time and about 4 minutes' thinking/planning time.

Make sure you use the thinking/planning time to focus on what the question requires and reviewing all you know about the topic.



How much do I write?

You could try it out for yourself. Don't write superfast, just a slow thoughtful speed explaining why you chose psychology. See how many words you can write in 30 seconds.

I managed 13. Which means about 25 words in a minute, maybe more like 20 words allowing for thinking time.

4-mark question

Outline the multi-store model of memory.

[4 marks]

The multi-store model of memory (MSM) was proposed by Atkinson and Shiffrin in the 1970s. This model suggests there are three stores in memory.

First are the sensory registers which have a very large capacity, e.g. your visual or auditory memories. Data is encoded according to the store.

Second is short-term memory (STM) which has limited capacity (about 7 chunks) and duration (about 18 seconds), and encodes data acoustically.

Third is long-term memory (LTM) which has unlimited capacity and duration and encodes data semantically.

(84 words)

Note that there are four paragraphs for a 4-mark answer and six paragraphs for a 6-mark answer.

This is a great way of ensuring you supply just the right amount of material.

Thinking in terms of six things provides a useful approach to structure your notes because the maximum mark for AO1 is 6 marks.

Quantity and quality

It is worth pointing out that good answers are not just about *quantity*. Within your four or six points you must demonstrate *quality* by including details (such as using specialist terms).

Write four chunks, each 20–25 words.

Write six chunks, each 20–25 words.

6-mark question

Describe the multi-store model of memory.

[6 marks]

Repeat the same first four paragraphs as for the 4-mark answer (on the left) and then add a further 2 marks' worth:

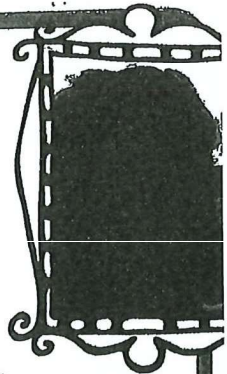
A key feature of the model is how information is passed from STM to LTM. It is done through prolonged maintenance rehearsal.

Also memories are retrieved from LTM to STM in order for recall to take place.

(121 words)

Bullet points

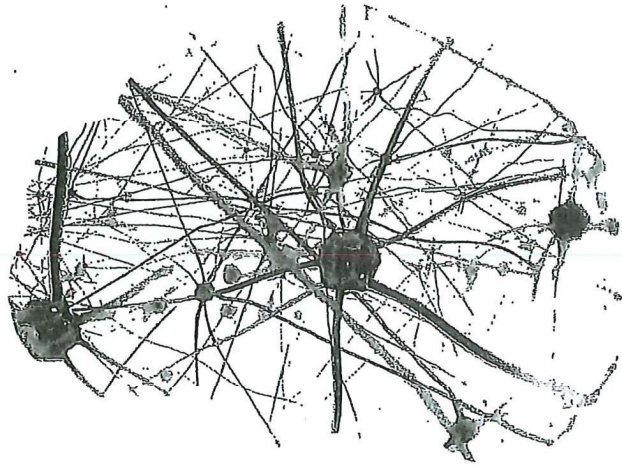
- Instead of paragraphs you can use bullet points.
- Psychology teacher **Jo Haycock** says: I think bullet points make an answer clearer and examiners like the fact that they can see how much information there is.
- I encourage my students to think about, for example, a 4-mark question in the following way... Am I going to use:
 - two bullet points and include a further sentence providing an explanation, or
 - four bullet points and write about four different things?
- So this is quite a mathematical approach to answering questions.



The psychology of learning

1. The brain grows

Your brain is plastic, i.e. it is changing all the time. At this very moment synapses (brain connections) are forming, and some connections are being pruned.



This is the neurophysiology of learning.

In one study (Pascual-Leone *et al.* 1995) children were asked to practise finger movements on a piano for five minutes every day. After five days the area of the brain that controls finger movement had enlarged.

Why? Because new connections were forming.

Children were then asked just to *think*, over a period of five days, about practising finger movements – no actual finger movement was involved. The researchers found that even the thinking caused an increase in brain size.

Charles Darwin noted that wild rabbits had bigger brains than domestic rabbits. Why? Because there were greater demands on their brains.

Psychology teacher
elicity Morgan says:

There is a fabulous Robert
Inston video (vimeo.com/
2378753), where he
builds a rope bridge over
a deep ravine to illustrate
what you are doing
when you form neural
connections.

When you are thinking
imagine that you are
growing your brain

2. Lump of clay problem

In my experience as a teacher and examiner, I have felt that students learn a theory as if it was one big lump.

This isn't true of all theories or explanations. For example the multi-store model has three stores so you have a structure from the start – it isn't one big lump. The Strange Situation also comes with a ready-made structure. But this is not true of Bowlby's attachment theory or social learning theory.



In such cases you need to reshape your lump of clay into SIX KEY POINTS.

For example, here is a list for the Authoritarian Personality:

1. Adorno *et al.* (1950)
2. F-scale
3. Childhood
4. Hierarchy
5. Cognitive style
6. Elms and Milgram (1966)

I have got six things because the most I ever need in an exam answer is 6 marks of description for any topic (at AS and A level).

But where did I get my list from?

I looked at a textbook and selected six key pieces of information.

Content	Gue
Adorno <i>et al.</i> (1950) proposed a dispositional explanation for obedience – the reason why people obey is not due to situational cues (as Milgram found) but due to their personality.	Adorno <i>et al.</i> (1950)
In order to test his idea he created the F-scale (F for fascism) which has statements such as 'Rules are there for people to follow, not change'. If a person agrees this indicates an Authoritarian Personality.	F-scale
Adorno suggested that certain parenting styles create an Authoritarian Personality – such parents require unquestioning obedience and love is conditional on such behaviour. This creates a child who has to repress his/her emotions.	Childhood
It also creates someone who values an authoritarian structure and defers to authority – a hierarchy of power.	Hierarchy
Such people tend to have a rigid cognitive style, for example they prefer issues to be framed as black or white.	Cognitive style
Elms and Milgram (1966) analysed the personality of participants in a Milgram-type study and found the most obedient scored high on the F-scale.	Elms and Milgram (1966)

158 words

Just right for 6 marks' A01.
(The Goldilocks solution – see page 39)

At all times remember ...

'I can always get a little bit better.'

Don't aim for the stars. Do what seems doable and, once you feel confident with a skill or a certain amount of content, then you are ready to look at a slight increase.

3. Cued recall

On the facing page the 'lump of clay problem' was solved by teasing out SIX KEY POINTS. I labelled each point with a few key words which act as *recall cues*.

Research on forgetting has shown that the major reason we forget is not because the information has vanished – it's there, somewhere, IF YOU WERE GIVEN THE RIGHT RECALL CUES.



SO, the only thing you need to consciously memorise are the six cues.

If you think of 'F-scale' but can't remember what goes with it, look back at your notes and the next time you will remember a little bit more. You don't have to remember exactly what is in your notes, just write something related to the cue 'F-scale'.

You can test yourself in two ways:

1. When you are walking down the street, see if you can remember the six cues for any topic. And try to remember something that goes with each cue.
2. Write timed answers. You can have your list of cues in front of you while you write your 6-mark AO1 answer. Give yourself just 6 minutes as you don't need any thinking time.

You also need notes for the evaluation, as discussed on the previous spread. Here's one for the Authoritarian Personality.



Christie and Jahoda (1954) argued that the scale has a right-wing bias and omits similar left-wing extremist views.

Bias

Your task is to use the information above to create a fully structured evaluation point (make your point, explain and conclude).

Not everyone is aiming for full marks!

If you are not aiming for full marks, you don't need to mark the worth of 201. It's up to you to decide what is right for you – you can always record marks worth 100 or 1000 and aim for three 200 points. Better to know three 200 points than to point at 201.

4. Processing

When I do masterclasses with students on exam performance, one of the little experiments I do is to show them a list of words.

I divide my audience in half and ask the right half to spend 30 seconds trying to memorise the words.

I ask the left half to rate each word for pleasantness – they should look at each word and give it a rating of 1 for very pleasant or 5 for very unpleasant, or choose a number in-between.

Twenty minutes later, I ask everyone to write down what words they can remember. It is obviously not a very well-controlled study but the chief point is this – the left side of the audience often remember at least half of the words.

Why?

They weren't asked to memorise anything but they did remember words ... presumably because they had made the words *meaningful* (by thinking about how pleasant the word is). Our memories have evolved to store information of importance.

Thomas Hyde and James Jenkins (1969) did a study where participants rated the pleasantness of words – and they found these participants recalled more words than participants who just had to count letter frequency. This is called 'incidental learning'.

There are lots of ways to process the information you have to remember:

Write songs

Listen to the 'Multi-store model song' on Youtube – there's even a red-nosed version!



Share with friends

Compare your notes with a friend, discuss and make changes.

Debate

Some topics lend themselves to a good debate – for example, you could debate whether the multi-store model is better than the working memory model. It doesn't matter how good your arguments are. Just thinking about the models is good for you.

You could also:

- Make a poster.
- Make revision cards.
- Create a podcast.

Some of these ways to study and revise are discussed on the next spread.



Book
Candle
Tomato
Mop
Bicycle
Tree
Gold
Letter
Piano
Child

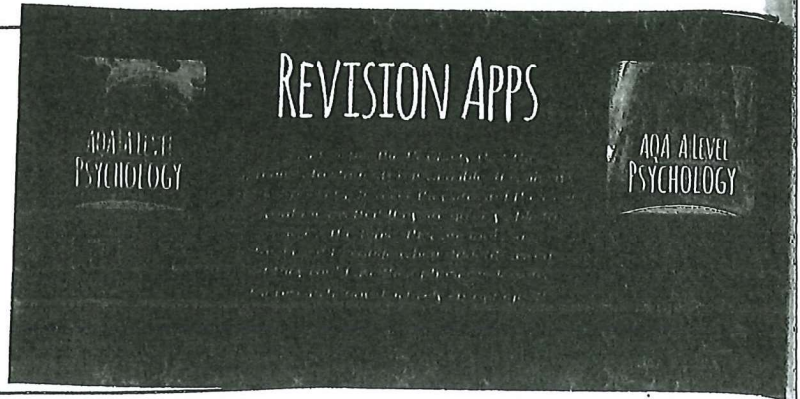
Ways to revise

Little and often

I asked teachers what they thought worked best for revision and one of the most consistent replies was 'little and often'.

One teacher told me that the quizzes in the Illuminate app were perfect for this kind of revision. When you are waiting in a queue you can always whip out your phone and use the app. Select a topic that you find challenging.

Do the 10-question quiz. Use the app to check the answers you got wrong.



Practise

Practise under timed conditions, with or without brief notes. *Using* your notes will help you remember them.

Ask for help

When you are revising it is vital to identify things you don't understand and find someone to explain it to you.

My eldest daughter lost all interest in school in her final year – but, come Easter time, decided she wanted to do well. So she studied hard but, most importantly, she wrote down anything she didn't understand and *pestered* her teachers until she did understand.

Give help

Peer tutoring is a system of teaching whereby more expert students (peer tutors) help less expert ones – but strangely enough it is often the peer tutors who benefit most because trying to explain things increases your own understanding (this is supported by psychological research e.g. Cloward 1967).

So don't regard helping others as a waste of your time.

Mark Jones set up peer tutoring in his psychology class. He asked first year students if they'd like to be mentored by second year students and then paired them up. They met for half-hour sessions and went through a section of a past paper or asked for difficult concepts to be explained. The topic was often research methods and looking at how concepts could be applied to scenarios.

They might typically do four sessions and in the final session the first year student might answer an exam question verbally or in writing, or explain back the areas to the second year student that they identified as challenging in the first session.

Psychology teacher **Deb Gajic** says:

Practise, practise and more practise, right from day one. I give students a list of command words and ensure they fully understand them. How and why questions are particularly difficult because they require more than just regurgitating knowledge.

Visual revision

Mind map

You are probably familiar with the idea of mind maps, which involve spatial and visual (colourful) representations of concepts.

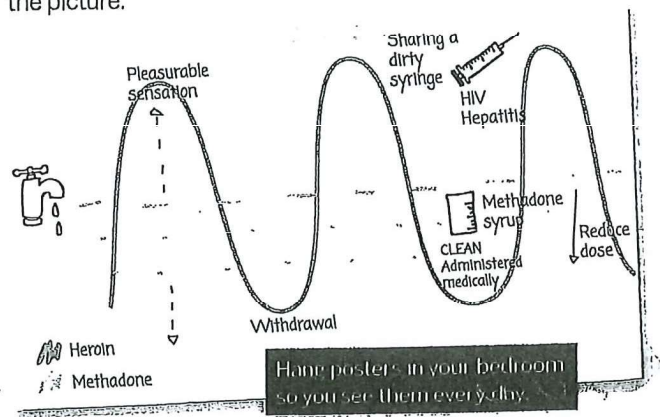
Their value lies most of all in their creation because, when you are composing the map, you are processing information – you are thinking about the connections between concepts.

Don't get hung up on the artwork – it's about elaborating meaning

Dual coding

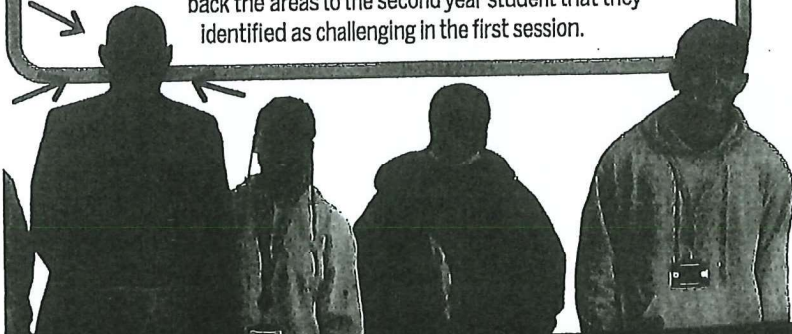
Write notes in text but add visual elements. This means you are coding information in two ways. Allan Paivio (1971) suggested this was a route to forming stronger memories because you are using both verbal and visual memory, and also processing the information to-be-remembered.

For any topic you are revising draw a picture and write text on the picture.



The example above comes from one of **Felicity Morgan's** lessons. The topic was on using drug therapy to treat addiction, looking at the pros and cons of antagonists. Composing the image helps understanding as well as creating a memory. As with most dual coding, it works best when students can see the image build up step-by-step, as the final image can contain quite a lot of information.

(PS Felicity says: You don't have to be good at drawing – in fact it is better if you aren't because it is about simple sketches rather than creating a work of art.)



Note-taking or note-making

The danger when creating a set of notes is that most people don't know how to do it and end up creating lengthy notes without really engaging with the text. Pages of notes may make you feel good but really have very little value. Not many synapses are growing.

Sara Berman (teacher and examiner) says:

I spend my first lesson teaching students how to make notes:

1. I ask the students to make notes on an article I provide.
2. After five minutes I tell them to stop, and ask whether anyone skimmed through the article first? It is hard to put your pen to one side and just read, but it gives you a very important overview of the key elements and structure of the text.
3. I then ask them to consider the purpose of making notes, which should lead them to recognise that it isn't just about creating a shorter version of the text. It is about starting to understand the material and form a structure for retaining that understanding.

I specifically emphasise that it is *making* and not *taking* notes. One is active and the other is passive. Read a page of your textbook. Then close the book and write down what you can recall. Look back in the book and add more details.

If you are *taking* notes while watching a video or listening to a lecture – then you should revisit these passive notes and *make* them your own, structuring and refining them. You might think of questions you want to ask or highlight what doesn't make sense.

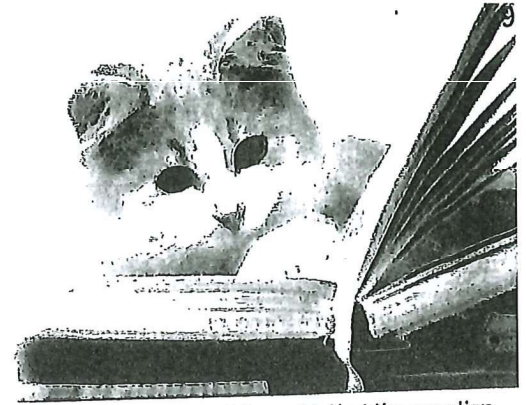
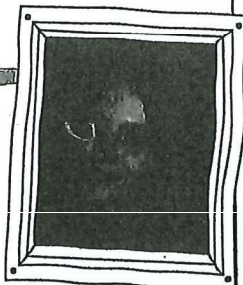


A study group

People are social animals. We like being with people. So, make your revision social. Share essays. Make up quizzes (e.g. gap fill) and swap them. Make videos together. Make revision podcasts for other group members. Mark each other's essays and discuss the mark, and consider ways to improve the essay. Make up application stems ...

Hope Hopkinson, A* student, says:

During my study leave I found myself getting quite frustrated just sitting at my desk all day every day, as sometimes I'd get confused and just wanted to stop revising altogether. What I found really helpful in dealing with this was breaking up my study days by meeting up with friends from my class to talk things through together and make sure we were all on the same page with the content. Whether it was just quizzing one another with flashcards or having a ten-minute chat about a study we weren't 100% sure about, I definitely wouldn't have got my A* without collaborating with my peers.



Teachers say 'buy a revision guide' but the question remains – what do you actually do with it? Just having the guide does not implant those words into your brain. Lots of **highlighting** has no benefit but makes students feel good!

Cornell sheets

Psychology teacher and author **Helen Kitching** recommends that her students use Cornell sheets because she feels these sheets are a really effective way of organising information and can be used as a revision tool as well.

On an A4 piece of paper, draw lines and headings as shown in the drawing on the right.

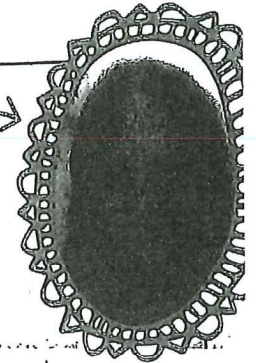
In the main body of the sheet (the largest area) you put your notes from a lesson or from your textbook. Don't try to write everything word for word. Try making bullet points, or draw a mind map, or add illustrations to help make the information memorable.

In the section that says 'Questions' you can put key words from a lesson. I prefer my students to put questions in this section because then it becomes a really useful revision aid, as you can come back to it a week later and, covering up the main body of information, see if you can answer the questions you set previously.

At the bottom of the page you'll add a one- or two-sentence summary of what is in the main body of the sheet. This helps you think about the information *semantically* (thinking about its meaning) and will help increase your ability to recall it.

For example, if you were learning about the procedure of Stanley Milgram's study, you could sketch stick people to represent the Learner, Teacher and Experimenter, with labels explaining what is happening such as the 'Teacher' being shown the electric shock machine and being given a 45 v shock. Next to this, on the left-hand side of the sheet, you could ask the question, 'What voltage test shock was the 'Teacher' given?'

You can also use a Cornell sheet at the end of the day to consolidate and recall what you have learned in your class lesson. This is useful because it checks your learning during the class and you can then go back to your textbook/notes to check how much you have recalled and how accurate it was. You can add in anything you forgot/got wrong in a different colour.



Date	Topic	Name
Questions	Notes and drawings	
		Summary

Dealing with barriers to success

Part of doing well in exams is considering the barriers to your success. On this spread I look at what I think are three really key issues and wish someone had brought them to my attention when I did A levels!

Self-control

The marshmallow test

Psychologist Walter Mischel and colleagues (1972) devised the marshmallow test. In this test a researcher spends time chatting with a child aged about 4. During the conversation the researcher offers the child one marshmallow (or a cookie or a pretzel stick). But then the researcher has to leave the room for 15 minutes and says to the child that he/she can have two marshmallows if they wait for that time without eating the marshmallow. The researcher then leaves the room and returns after the allotted time.

What is the outcome? Research studies have found that, by the time the 15 minutes are up, about two-thirds of the children had been unable to resist and had eaten the marshmallow.

The task assesses the ability to resist temptation (to delay gratification). Most importantly this ability to resist seems to be linked to better-than-average school achievement. Subsequent studies have reassessed some of the original children and found that, for example, they had higher scores on achievement tests and also had more activity in parts of the brain associated with self-control (Casey *et al.* 2011).

You can learn self-control

This research suggests that self-control is a good thing for doing well academically. It may be that some people are born with such self-control abilities or perhaps they learn them. Either way it could affect their brain development. The bottom line is that people who have self-control can apply this to other situations and this leads to better academic achievement.

Veronika Job and colleagues (2015) showed this in a study where one group of students was required to squeeze a hand grip twice a day for a period of two weeks (each time they had to squeeze for as long as possible).

Seven months later the student participants' exam grades were significantly higher than a control group who did no hand-squeezing.

You learn willpower to resist giving up.



Hope Hopkinson considers the effects of stress and anxiety:

Prioritising your mental health is important! I found my best study happened after I'd recognised when I was having mental blocks and needed to stop and take some time for myself. Just doing things like seeing friends and having a day off (and not feeling guilty about it!) made sure I was only revising when I was in a good headspace, and made the work I was doing of a higher quality.

Stress and anxiety

Imagine your teacher saying at the beginning of a lesson: 'I am going to ask one of you to answer a Research methods question without any preparation.'

Would you prefer to:

- Stay in your seat and write down your answer.
- Stand at the front of the class and answer the question.

I suspect you will select the first option. Why? Because it is hard to think clearly when feeling anxious.

Stress leads to activation of the autonomic nervous system.

↳ Adrenaline is produced creating 'arousal'

↳ Negative effect on thinking and memory.

Adrenaline (arousal) has a negative effect on recall, especially for knowledge that is not well-understood – as in Research methods application questions where you do have to do some thinking.

Relaxation

It is important to learn relaxation techniques now so you can use them when experiencing exam stress.

Stress/anxiety can also affect your ability to revise well because you want your memory and thinking to be working well, so incorporate relaxation into your revision.

There is a lot of online advice about relaxation. The one bit of advice I would give you is not to worry if it doesn't seem to be working. If your mind starts to wander and you feel useless at relaxing, just gently pull your thoughts back to your relaxation music or thoughts. Relaxation takes a while to learn.

Good revision should be stress-free.

If you do find yourself feeling stressed, try to take a step back and take a break. Look at the problem from a different perspective and try to find a solution.

The advice is most in a hand grip

Don't be discouraged by failure

Believe me, this is the biggest barrier to success.

It is what separates successful and less successful people.

Think of sportspeople. They experience failure all the time. They regularly lose a point or a game, or even a whole match. No one starts by beating everyone or always being in the winning team.

Each sportsperson has a choice when they lose:

I lost which means I am not as good as my opponent – but I need to get a little better and maybe I can beat them next time.

I lost which means I am just not that good and I might as well give up.

WHEN THE GOING GETS TOUGH, THE TOUGH GET GOING.



People who don't like a challenge give up – so they can never be successful. They have no chance.

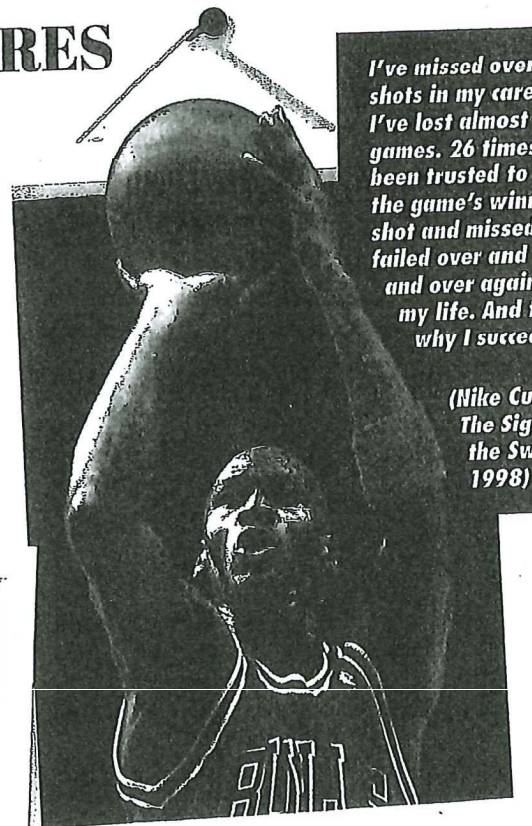
People who like a challenge may not be successful in the end – but at least they have a chance. If you give up your chances are nil.

GALLERY OF FAILURES



At age 22, Walt Disney was fired from a Missouri newspaper for not being creative enough. One of his early ventures, called Laugh-O-Gram Studios, went bankrupt. With just \$40 to his name, he took off to Los Angeles to try his hand at acting. But he failed at that, too. Whatever kept him going?

Simon Cowell was a weak student at school and was even held back a year. He dropped out at 16. At 23 he started his own record label which failed. Two years later he started another record label but went bankrupt five years later and moved back home with enormous debts. He was determined to succeed and tried a third time...



I've missed over 900 shots in my career, I've lost almost 300 games. 26 times I've been trusted to take the game's winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed.

(Nike Culture: The Sign of the Swoosh, 1998)

The quote and picture above is Michael Jordan, probably the all-time best American basketball player. He was dropped from his high school basketball team because at 5'11" he was deemed too short. He didn't let that discourage him. He focused on other attributes that he could change. Throughout his career Jordan learned to use his failures as opportunities – they taught him what he was not doing right and he made it his business to put these right. So his ultimate success was due to learning lessons from his failures.

At any time I can always get a little bit better.

Improving your memory

Recognition versus recall

There are two key ways your memory can be tested:

Recognition e.g. recognising the words of a song and singing along.

Recall e.g. trying to sing the words of a song from memory.

How do you revise?

Most students revise through recognition – they read and reread notes, make more notes, underline key phrases in their revision guide etc.

They are testing recognition not recall, whereas most exam questions require recall, which is more difficult.

The testing effect

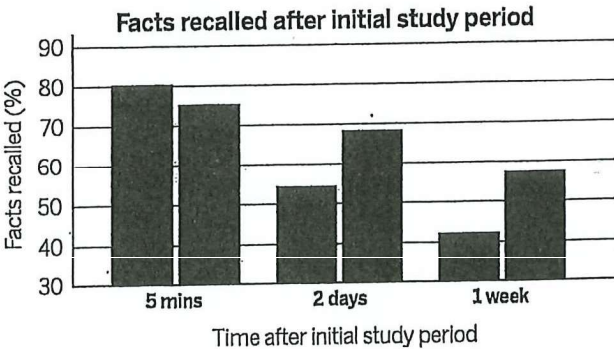
In one study (Roediger and Karpicke 2006), two groups of students were given the following tasks:

Group 1 (blue) studied more – they read an explanation repeatedly (more than twice). Finally they took the three recall tests.

Group 2 (red) took a practice test – they read an explanation and then took a practice test to see how much they recalled. Next, they had an opportunity to study the text again. Finally they took the three recall tests.

For all participants, the first recall test was five minutes after their last reading, a second one two days later and a third test after a week.

The graph below shows the results – testing (taking practice tests) leads to more durable memories.

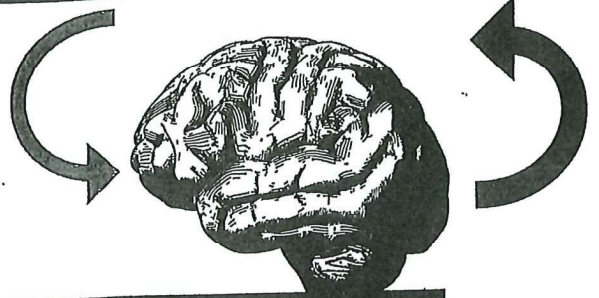


Don't focus on getting it in – focus on getting it out.



Fope Brown is working for a year as a school mentor before she starts her Psychology degree:

From what I've observed as a subject mentor, the students who succeed are those who are genuinely interested in the subject and take their time to study the course, they are able to experiment with different revision tools and find which one works best for them.

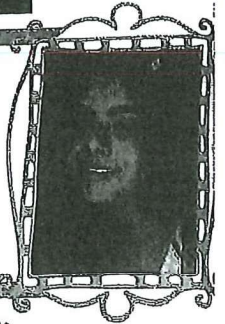


Focus on **OUT** not **IN**

Focus on getting information **out** of your brain instead of trying to get it **into** your brain. The result will be a much stronger memory.

Student **Tia Jacobs** says:

Plan the 16-markers using your textbook and then try to test your recall first. If you are missing areas go back with a different coloured pen and add more information. This gives you ready-to-use material and a better understanding.



Test your knowledge*

*'Knowledge' includes knowledge of evaluation.

There are many ways to do this, such as:

Make up quizzes

- Creating the quiz means you will be processing the text.
- Doing the quiz later involves testing your knowledge.

Answer exam questions

- In timed conditions.
- Keep repeating, with fewer and fewer prompts.

Lucy Griffin considers the benefits of retrieval practice:

One of the main techniques that I used when revising was retrieval practice because my teacher always emphasised how important it was. At the end of the week I would always make sure I tried to remember as much as possible from the topic area we had learned that week and would always go over at least one other topic area that I hadn't covered for a while. Sometimes I would just write down everything I knew about that topic area.

SQ3R

This is a method of reading comprehension proposed by Francis P. Robinson (1946) which is related to the testing effect.

S	Skim (survey)	Take a very quick look through one section. Look at headings and subheadings, pictures, any other features. Get a feel for what it is about.
Q	Question	Think of questions you already have. For example, convert headings and subheadings into questions. You might simply ask 'What is this section about?'
R	Read	Read the text seeking to find answers to one of your questions.
R	Retrieve	Try to tell someone else what you have just read about in relation to your question.
R	Review	Write notes about what you have just explained.



Student **Tahira Mohamedbhai** used an idea similar to the memory palace which is described on the right:

When it came to revising psychology the technique which really helped me was making connections to things I like. For example, watching the TV show *The Fall* allowed me to make the connection between the top-down approach used by forensic psychologists and the techniques used in the show. Making these links, however random, made it easier to remember the vast amount of information on the course.

Rehearsal versus processing

I discussed this on page 93. Numerous studies have shown that, even when you are not trying to memorise something – bang, it seems to be there. It's called *incidental learning* – you learn things even when you are not trying to learn.

Consider this ... what were you doing last weekend? You probably remember a number of things but it is not because you deliberately tried to remember them. You remember them because they were meaningful in some way.

That's the same with revision. Repetition can lead to incidental learning – but meaningfulness is much more effective.

Not the multi-store model

The key study that demonstrated incidental learning and the importance of meaning was conducted by Fergus Craik and Endel Tulving (1975). They demonstrated that amount of processing was the route to long-term memory, challenging the multi-store model's emphasis on the role of rehearsal.

Participants were asked to complete a sheet of questions. There were three types of questions presented in random order and participants were given one of the two possible answers and had to answer yes or no.

Question	Correct answer		Level of processing
	Yes	No	
Is the word in capital letters?	TABLE	table	Structural
Does the word rhyme with WEIGHT?	crate	market	Phonemic (sound)
Does the word fit in the sentence: 'He met a ____ in the street'?	friend	cloud	Sentence

low
↑
↓
high

At the end participants were unexpectedly asked to recall the words. The higher the level of processing the more likely the word was remembered (regardless of whether the word was from the yes or no column).

The memory palace

James Paterson teaches psychology and also has been the British memory champion, so he knows how to use his memory:

Imagine that the handle of your front door has been replaced by a baguette. You grab hold of it and make your way inside. You see that the carpet in the hallway has been transformed into a thick sheet of cereal which crunches as you walk on it. You move through your home in a logical order towards the next room which happens to be the kitchen. You look inside to see that every appliance has been wrapped in newspaper. You head for the stairs and you are startled by hundreds of batteries flowing down towards you like a river. You continue this fantastical route around your home for as long as you need to. You see weird and wonderful things happening at each step along the way.

You have just created a memory palace. In other words, you have taken a list of items that you wish to remember (in this case, for a shopping list) and you have used your imagination to link those items, one by one, to locations within a place that is familiar to you. The familiarity of this place makes retracing your steps an easy task and in doing so, the items are recalled in order – baguette, cereal, newspaper, batteries and so on.

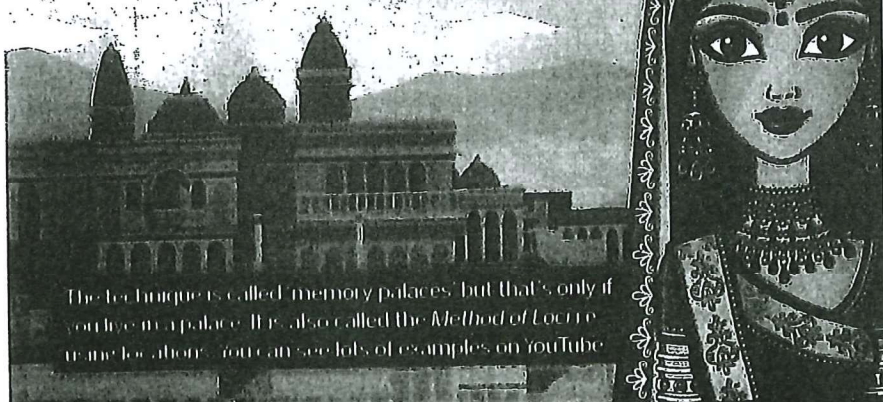
Does it really work?

Many people dismiss memory palaces as a tool with no real scope beyond the primary school classroom. However, I can tell you from personal experience as a student and as an A level Psychology teacher that this belief dissolves for those who allow themselves a few days to try it out.

Write down a list of 'locations' around your house, around friends' houses, around train stations, old schools and restaurants that you know. Once you have done that, fill them with information. Try a list of countries in order of size, the first 20 elements of the periodic table or perhaps the Best Picture winners at the Oscars since the year 2000. It will be interesting to see what your imagination conjures up and after some fine-tuning you will discover how the technique works best for you and how you may apply it to your serious studies.

As a student I created a memory palace of over 3,000 locations which I used to store the facts I needed to remember for my final degree exam. As a teacher I train my students in the use of memory palaces so that they can really make the information stick. They discover that using them in exams makes the whole experience less stressful.

Trust me, have a go. Before long you will see that using memory palaces as part of your exam preparation will bring tangible benefits come the day of the exam.



The technique is called 'memory palaces' but that's only if you live in a palace. It's also called the *Method of Loci* or *mnemonic locations*. You can see lots of examples on YouTube.

Psychology is the science of behaviour and experience

Armchair psychology

People like to offer their own explanations for why people do what they do.

Psychologists go beyond common sense and beyond personal opinions. The single thing that matters most in psychology is evidence. Real psychologists, as opposed to armchair ones, are expected to provide evidence for their every utterance (well, almost every one).

Evidence doesn't come from personal experience, or subjective opinion. It comes from what we call **empirical** data, which is what research studies are all about.

Research studies are crucially important, and form the foundations of psychology. Psychologists do research studies – they write down what they did (**procedures**) and what they found (**findings**). Then other psychologists can read about the studies and criticise them or design a new study.

But let's not be too dismissive of that armchair theorising. That's the starting point of our psychological knowledge. We then use the evidence from studies to evaluate our theories, to change and develop them, to get as close to the truth about behaviour as we scientifically can.

The key word is **science**.

We think science is the best thing since sliced bread – but actually it isn't a 'thing', it's a *process*. It is a wonderful process that enables us to get closer and closer to understanding the world. This is the process:

Step 1: Identify a research question or issue. This usually stems from observing an interesting behaviour, or from a broader psychological theory.

For example (and lets take a simple example), have you ever heard the saying 'familiarity breeds contempt' or 'absence makes the heart grow fonder'? So which is true?

Step 2: Decide on a topic to study (your **aim**). Your observations lead you to decide on a topic to study. In some kinds of scientific research a formal statement is made – a **hypothesis**. This is a statement of what you believe is true. You state this so that you can test to see whether it is supported by evidence and thus may reflect reality.

In order to test our idea we need to go with one of the views – familiarity leads to increased liking rather than contempt.

So here's our hypothesis 'You feel more positive about a word you hear ten times than a word you hear just once'.

Step 3: Design a study to test your hypothesis. This is where it gets remarkable. The key feature of science (as you should know from GCSE) is that it is controlled. There are many different kinds of study but let's consider doing a controlled experiment like Festinger and Carlsmith's (previous page) – we get one group of people to do a task in one way and we get another group of people to do a task differently so we can compare them.

In fact Robert Zajonc (a well-known psychologist whose name just happens to be pronounced as 'Science' – yes, really) tested just such a hypothesis. He made up a list of words such as ZABULON and ENANWAL.

Participants were asked to listen to a list of words. One group of participants heard the word ZABULON 10 times in the list and a second group heard it once. The opposite was true for ENANWAL.*

Step 4: Carry out the study. It's very important to take due account of **ethical issues** when conducting the study (see facing page).

At the end participants were asked to rate how much they liked all the words in the list.

Step 5: Analyse the results and draw conclusions. You may present your results in a bar chart or may do a statistical test to see if your hypothesis is supported.

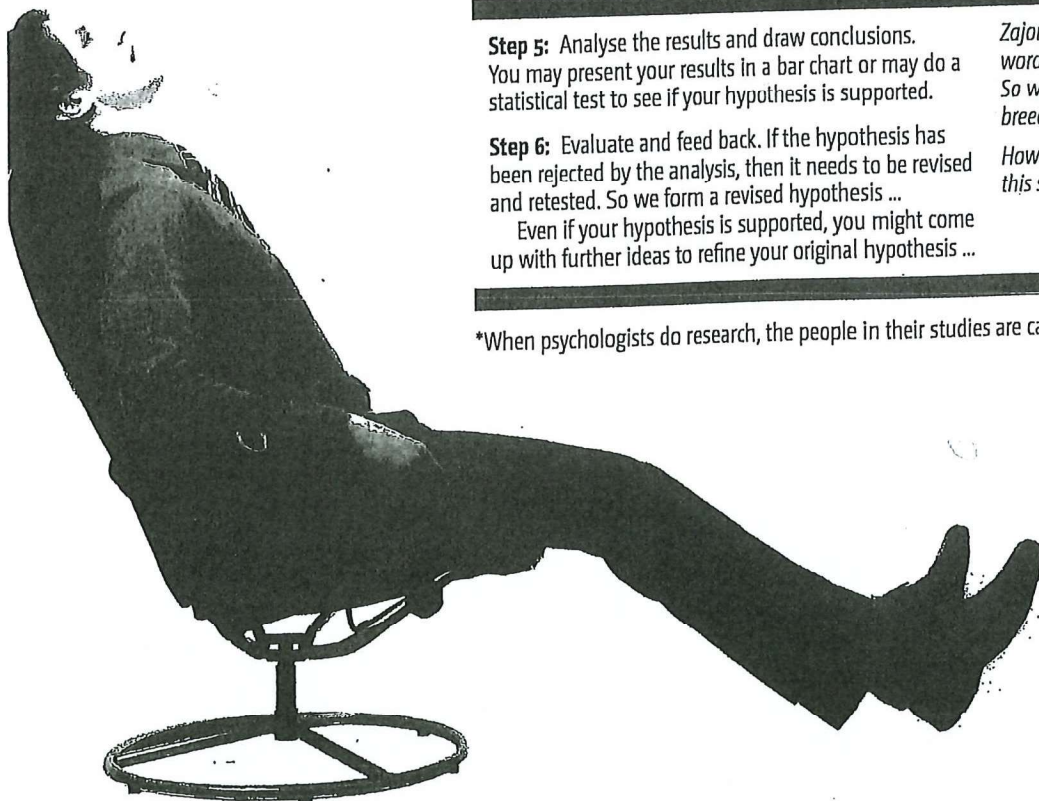
Zajonc found that participants did rate the words heard more frequently as more likeable. So we can conclude that familiarity does not breed contempt.

Step 6: Evaluate and feed back. If the hypothesis has been rejected by the analysis, then it needs to be revised and retested. So we form a revised hypothesis ...

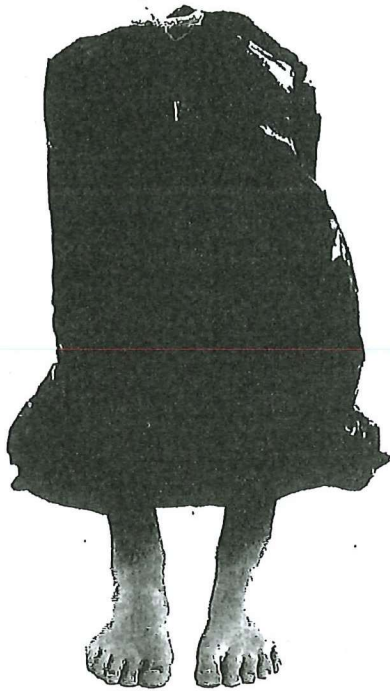
However, there are strengths and limitations of this study. Can you think of any?

Even if your hypothesis is supported, you might come up with further ideas to refine your original hypothesis ...

*When psychologists do research, the people in their studies are called 'participants'.



The even better news is that psychologists don't have all the answers. The truly great thing about psychology, the thing that really gets thousands of researchers and practitioners up in the mornings, is that there is still so much to learn and understand. There is still a lot of room for discussion and debate. And now you can join in.



A mysterious student has been attending a class at Oregon State University for the past two months enveloped in a big black bag. Only his bare feet show. Each Monday, Wednesday and Friday at 11.00 am the Black Bag sits on a small table near the back of the classroom. The class is Speech 113 – basic persuasion ... Charles Goetzinger, professor of the class, knows the identity of the person inside. None of his students in the class do. Goetzinger said the students' attitude changed from hostility toward the Black Bag to curiosity and finally to friendship.

Taken from the Associated Press (27 February 1967)

When Zajonc (1968) wrote a report of his study described on the facing page he began with the story above. It was the starting point for his study. This event in the basic persuasion class suggests that familiarity doesn't breed contempt – it actually breeds liking for something. At least in some situations...

He called this the *mere exposure effect*.

Validity

If you think about the study by Zajonc on the facing page, something might have occurred to you – participants would have realised that some of the words were repeated a lot. This may have led at least some participants to try to guess what the study was about and alter their behaviour.

Therefore the results of the study might not actually represent anything real. This is an issue of **validity** – which refers to whether something is real or just an outcome of a research study that actually doesn't represent reality. Validity is a difficult topic to understand so don't expect to get it all at once. But it is an issue of central importance in psychological research so you will need to get it eventually.

Internal validity

Internal validity concerns things *inside* a research study. It may be the question of whether we are testing what we actually intend to test. In our **familiarity example**, do you think we were actually testing whether familiarity makes something more likeable?

Internal validity also concerns the question of 'control'. It might be that other factors affected our findings. For example, some people might have heard the words ZABULON and ENANWAL before (not likely – that's why they were chosen). But if they had, that would have spoiled everything. Researchers need to try to control everything that could cause the findings to be due to anything other than what was intended. This is something discussed in Chapter 6.

External validity

External validity is concerned with things *outside* the research study. To what extent can we generalise our research findings to other situations? Do you think Zajonc's study could be used to explain why repeated adverts are very successful on TV?

Research methods in Psychology

Psychologists use a variety of methods in their research – all of them aim to be scientific because they seek to be objective and controlled and repeatable. Often psychologists conduct **experiments**, which means they can draw conclusions about cause and effect. The main issue with experiments is they can be quite trivial, just looking at a few variables doesn't always represent real life (you might feel that about Zajonc's study).

One alternative is to simply **observe** what people do in their everyday lives – psychologists watch people through two-way mirrors or from behind a bush in a park (not very often). The problem here is that, frequently, there is just too much going on to allow us to draw useful conclusions. Other methods include **questionnaires**, **interviews**, **case studies** and also performing **correlational analysis**.

The key is using all kinds of different methods to study one aspect of behaviour and considering how the findings from the different kinds of study inform us.

As research methods are so important to psychology, they feature very prominently throughout this book.

Ethics in Psychology

Ethics refers to standards of behaviour, behaving with due respect for the people (or animals) you are studying. Ethical issues matter in psychology because the potential for causing damage is so much greater in psychology than it is in, say, chemistry. The subject matter of psychology is alive and can get upset. It is all too easy to carry out studies that could expose people to embarrassment, anxiety, stress or even worse forms of **psychological harm**.

So psychologists are always very careful to include steps to reduce this possibility, to make sure that the dignity and welfare of participants are protected. Ethical guidance is issued by professional psychological associations such as the British Psychological Society (BPS) or the American Psychological Association (APA). These organisations publish codes of conduct that psychologists and researchers have to follow in their research and professional practice.

Statistical analysis in Psychology

We've seen that conducting empirical research is a fundamental activity of psychology, but it would all be wasted effort if we didn't have a way of knowing what our results mean. This is where statistics come in.

There are two types of statistics in widespread use in psychology – **descriptive statistics** and **statistical tests**. Descriptive statistics summarise data. They include measures such as the **mean** and drawing **graphs**. Such methods allow us to get a quick snapshot of the patterns in our data. Statistical tests are based on **probability** (see Chapter 6). The key thing for you to know is they tell us if any pattern in our results is just due to chance.

Approaches

In Chapter 4 we discuss approaches in psychology, so this is a very brief introduction to support you until you get to that chapter.

The idea of an 'approach' is that psychologists tend to have a general view of what causes behaviour. Some psychologists think that the way we behave is largely inherited (that's one approach), others believe it is largely learned through your life experience (another approach to understanding behaviour).

For example – think about football.

What is it that makes someone interested in football or good at it? Did they inherit some kind of football gene from their parents or did they learn to love it perhaps because their family enjoyed kicking a ball around?

Psychologists call this **nature** (what you are born with) or **nurture** (your life experiences).

Aside from views on nature–nurture, there are other key differences between the main approaches described on this page.



Nature or nurture? Or nappies?

Biological approach

The biological approach explains behaviour in terms of physical causes in our brains and bodies, and this includes our **genes**.

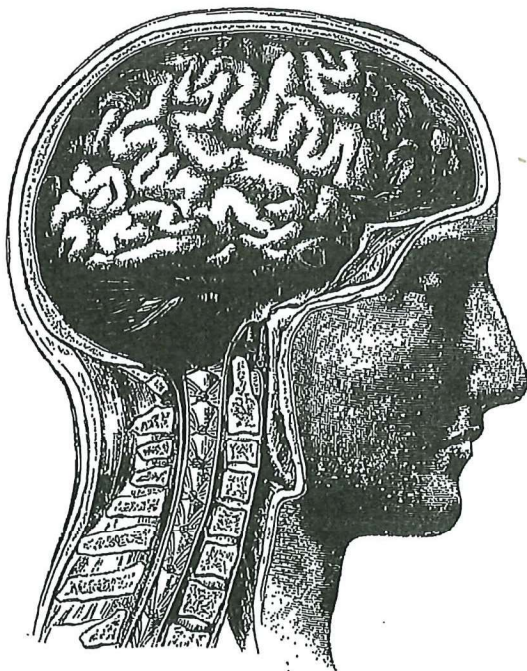
The most likely biological source of causes of behaviour is the brain, which produces chemicals called **neurotransmitters** (such as **serotonin**, which plays an important role in regulating our moods).

The **endocrine system** is also significant because it produces **hormones** (for example **adrenaline**) that have a big impact on our behaviour.

The methods used by this approach to investigate behaviour are physical too. **Brain scans** can show us the structure and functioning of the brain. Researchers then try to relate these to normal as well as abnormal behaviours. In the last 20 years the development of brain scanning techniques has led to a massive increase in understanding how the brain relates to behaviour.

Research on animals can be helpful too, because we can't deliberately make changes to the human brain to observe the effect on behaviour (no really, we can't, not for research purposes).

This approach to understanding behaviour is largely 'nature' – though many aspects of the brain and body and even your genes (surprisingly) can be changed by nurture.



Behaviourist approach

The central concept of this approach is the influence of experience on our behaviour, and how we *learn* behaviours. Basically we are born as 'blank slates' and what we become is shaped by experience (sometimes termed 'the environment').

Basically we either learn through association (**classical conditioning**) or **reinforcement (operant conditioning)**.

If you have cats you will know that they come running as soon as they hear a cupboard door being opened. They have learned to *associate* that noise with food.

You probably also know the usefulness of treats with animals – a small reward *reinforces* a behaviour and makes it more likely to happen in the future.

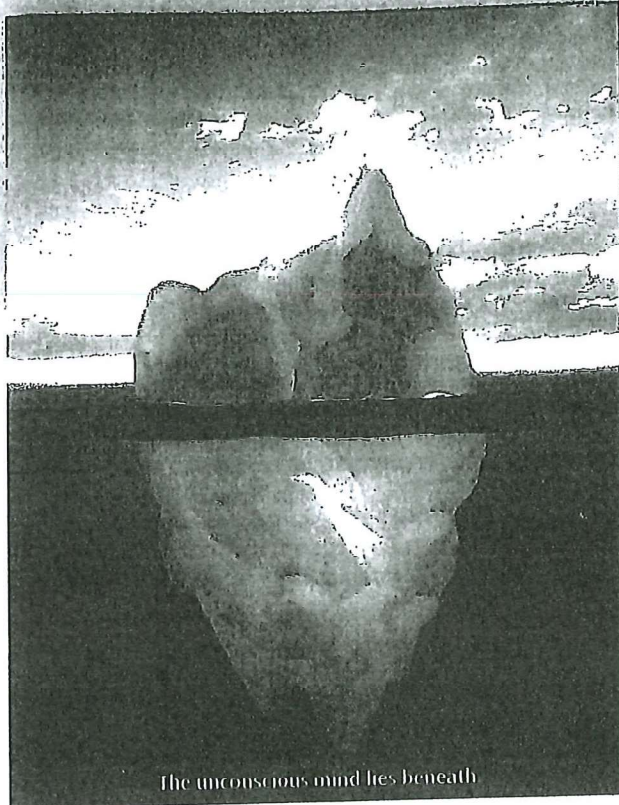
These are examples of classical and operant conditioning. Whatever characteristics we might be born with, these take second place to the crucial roles of our experience and the environment.

Because this approach is most closely associated with scientific psychology, it's no surprise that **behaviourists** are cheerleaders for the **laboratory** research in psychology because it involves precise and objective measurement of behaviour in controlled conditions. The approach also uses research with animals, because it sees no significant qualitative differences between human and animal behaviour.

PS: There is also **social learning theory**, an extension of the behaviourist approach that incorporates indirect learning.



AS level students only need to study the biological, behaviourist and cognitive approaches. A level students go on to study the psychodynamic and humanistic approaches. We have covered all these approaches in Chapter 4.



The unconscious mind lies beneath

Psychodynamic approach

This is the approach that originated with Sigmund Freud, possibly the most well-known psychologist ever. He believed that the causes of behaviour lie within the **unconscious** mind, the part of the mind that is normally inaccessible but is extremely active. The iceberg metaphor has been used to represent this 'invisible' unconscious mind that has powerful effects (think Titanic).

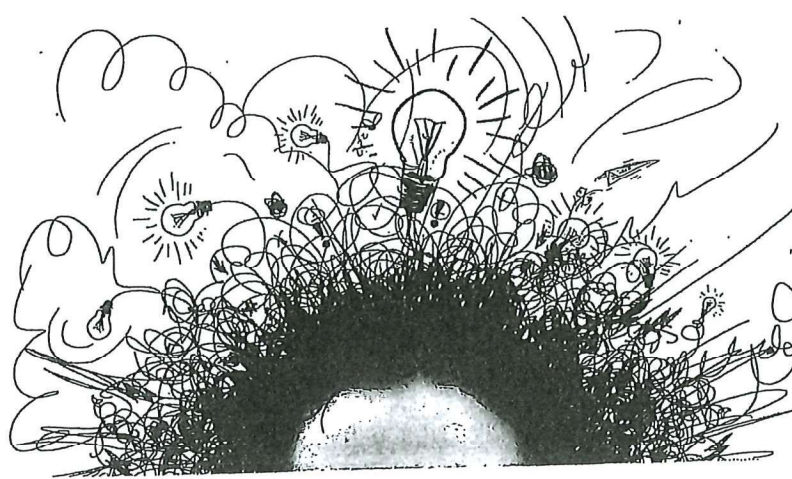
There is constant dynamic conflict between parts of the unconscious and the conscious mind. We can get a brief glimpse of this conflict when we dream, which is why Freud advocated the use of dream interpretation to help us understand what's in the unconscious and why it affects us.

The approach also emphasises the importance of childhood experiences, which have a major impact on our personality development and our behaviour as adults.

Humanistic approach

The **humanistic approach** is firmly based on the concept of the self. This concerns issues to do with your self-concept (how you see yourself), and your **self-esteem** (how you feel about yourself).

The humanistic approach also emphasises the importance of being able to make our own rational choices. All of the other approaches suggest that our behaviour is, to a large extent, **determined** by other forces not always under our control – genes, the environment, our thought patterns, or our unconscious mind. Humanistic psychologists believe the goal of psychology is not prediction or control but to understand the whole person.



Cognitive approach

This approach focuses on thinking – our feelings, beliefs, attitudes and expectations and the effects they have on our behaviour.

The approach employs the 'computer metaphor' to explain how our minds work. Like computers, we process information.

The approach has been used to explain many things including mental disorders such as **depression**. According to the cognitive approach depression occurs because people *think* negatively – they put the worst possible interpretation on events and play down the good things that happen to them. They think it will never get better. This leads to despair.

Like behaviourist psychologists, cognitive psychologists use laboratory research as a key research method. But a big difference is that while behaviourists have no interest in what goes on inside the mind, cognitive psychologists are the opposite. The processes inside the mind are precisely what they are interested in and have an important link to the behaviours we observe.

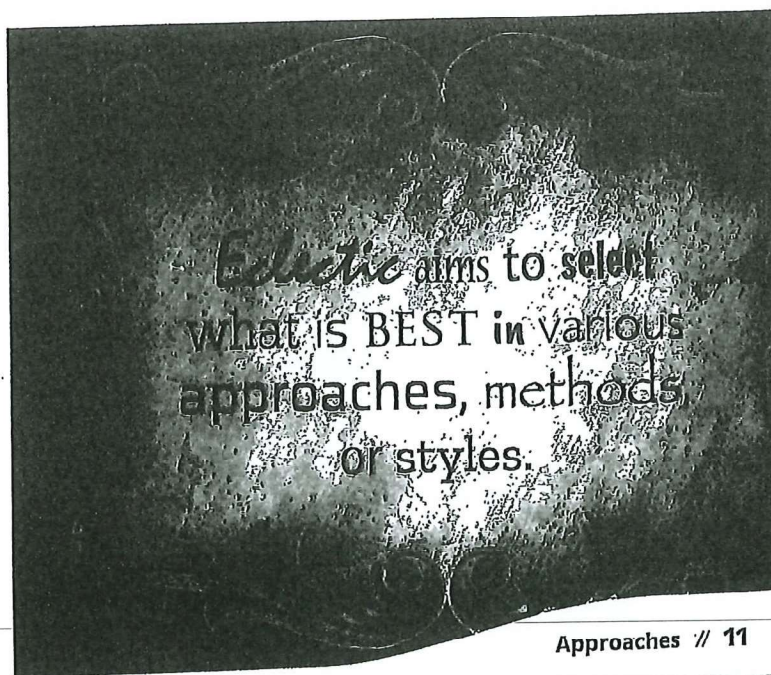
Whatever works best

The distance from the biological approach to the humanistic perspective represents the huge range that is psychology.

Although researchers working in these two approaches may call themselves psychologists, they have very little in common in terms of their assumptions about behaviour, their preferred explanations, their philosophical viewpoints, the methods they use to investigate behaviour, or even the research questions they are interested in answering.

That's how broad a subject psychology is – and that's one reason why it's so exciting. These different approaches also reflect the undoubted truth that human behaviour is complex and is probably not going to be fully understood from just one approach.

Because of this, in recent years, there has been a growth of the eclectic approach. This is preferred by psychologists who aren't committed to any one particular approach. The eclectic approach uses the assumptions, explanations and methods from many different approaches. Their slogan could well be: 'Whatever works best'.



Psychology in the real world

The goals of Psychology

Consider one of the really important health issues of our times – the obesity crisis in Britain. Here's a disturbing statistic to be getting on with – over half of the men and women in Britain are overweight or clinically obese. Can psychology do anything to help? In the Apply it on the right we use obesity as an example to illustrate the goals of psychology below.

Describing behaviour

Psychologists want to be able to describe what is happening when people 'behave'. This is mostly a matter of observation. Psychologists observe how behaviours are related to each other. They might, for example, notice that certain behaviours occur together quite often and form a pattern. They might even begin to get an indication of which behaviours are 'normal' and which 'abnormal'. Eventually, after enough studies have been conducted, possible explanations of the behaviour emerge, which takes us on to the next goal of psychology.

Explaining behaviour

Describing behaviour is just a starting point. Psychologists really want to go beyond merely describing the behaviour that is happening and try to *explain* where it comes from, the reasons for it, what causes it. To do this, they formulate theories of behaviour and then use the **scientific method** (see page 8) to test them. This of course is where disagreements emerge. There are many competing theories about the causes of behaviour, which often reflect the general **approach** psychologists adopt within psychology. Can psychologists do more than explain behaviour? Yes, they can predict behaviour.

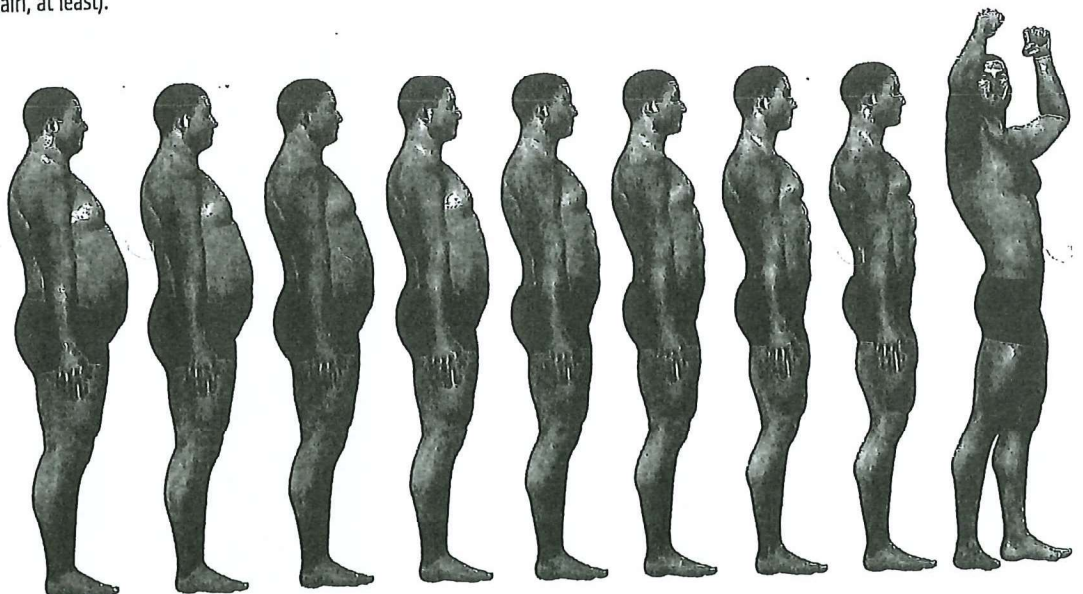
Predicting behaviour

This is the logical next step. Once we are confident that certain behaviours consistently occur under certain conditions, we can use that knowledge to predict how a person's behaviour (including their thoughts) might change in the future. These predictions (known as **hypotheses**) can be turned into statements that can be tested in studies to see if the explanation was right.

Controlling behaviour

The idea that psychology should be in the business of controlling behaviour may have sinister overtones for some people. But what if we changed the language a little? What if we said that the ultimate goal of psychology is to *change* behaviour? This is unquestionably something that many branches of psychology attempt to do. For example, psychological therapies for mental disorders are not just about trying to understand or explain behaviours such as phobias or depression. The intention is to change people's behaviour, from **maladaptive**, 'abnormal' behaviours that cause pain and suffering to adaptive, 'normal' behaviours that bring happiness (or less pain, at least).

Obesity is reaching epidemic proportions and has been described as a national crisis. There is much that psychology can do to help by using scientific methods to describe, explain, predict and change obesity-related behaviours.



Apply it Concepts

Obesity and the goals of Psychology

Describing obesity

Researchers use various research methods to work out what obesity is and how it relates to other factors. For example, they may use questionnaires or interviews to learn about attitudes towards eating in obese people. Psychologists might observe people's eating behaviour and measure how much people actually do eat. They might do **brain scans** to see if obese and thin people differ in thinking patterns.

Explaining obesity

The descriptions that are collected enable psychologists to develop explanations. There are several current explanations drawn from the whole range of approaches in psychology. There's a **biological explanation** that explains obesity in terms of the activity of **hormones** and other chemicals within the body. There's a **behaviourist explanation** that focuses on past learning experiences of rewards and punishments involving food. There's also a **cognitive explanation** that emphasises the ways that we think about, interpret and perceive the meaning of food and eating.

Predicting obesity

If obesity is associated with inactivity, it is a short step to make the prediction that less active people are more likely to be overweight.

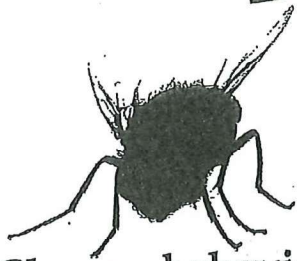
If we identify **depression** as one of the causes of obesity, then again it is a simple matter to predict that depressed people are more likely to be obese.

Controlling obesity

There may even be a political dimension to behavioural control (see 'The Nudge Unit' on the facing page). The obesity crisis is a good example. Because the costs of obesity are so high (especially Type 2 diabetes) the government employs psychologists to devise programmes to change eating and exercise behaviours in people who are overweight.



YOU
CAN
DO
IT



Change behaviour

The Nudge Unit

This is the popular name for the *Behavioural Insights Team*, an organisation that used to be part of the UK government. It was formed to change behaviour one small step at a time (that is, to 'nudge' people into making small changes, because such changes are more achievable).

For example, the Nudge Unit has devised projects to get more people to sign up to organ donation or to give blood, to encourage people to pay their taxes on time, to give more time and money to charity, reduce food waste, and so on.

They even tried to offer some advice to the England team at the World Cup in 2014, by applying psychological research to taking better penalties (ironically, the team never had the chance to put this advice to the test).

Here's another example of behavioural control:

The people at Schiphol Airport in Amsterdam wanted to know how you might stop men from missing the urinals and making a mess on the floor of the airport toilets. You could put up signs telling them to be more careful, or warn them of dire consequences if they don't get their aim straightened out.

But here's a better idea. Men (OK, *some* men) like nothing more than having something to aim at. So men's urinals at Schiphol Airport were given a small but significant redesign. A tiny black spot, in the shape of a fly, was inlaid into the middle of the pristine white porcelain urinal. It stood out like... well, like a fly on a white urinal.

Although no truly scientific studies have been conducted into the effectiveness of this method, apparently Schiphol's cleaning costs were reduced by 8%.

Why did you do Psychology?

Some people think it will help them read other people's minds. Some people, when they find out you're doing psychology, really do say things like, 'I'd better watch what I say then,' or, 'Does that mean you're trying to analyse me?' They might even say, 'I had this really interesting dream last night. What happened was...' At which point, you might be wishing you'd said you were doing English Lit instead.

Apply it Concepts

The science of self-talk

Motivating self-talk refers to the things we say to ourselves to get us moving or motivated to do something. We probably all do this from time to time but sportsmen and sportswomen use this technique more than most.

Sanda Dolcos and Dolores Albarracín (2014) noticed that there are two ways of using such self-talk – first person and second person. For instance, we can say to ourselves 'I can do it' (first-person) or 'you can do it' (second-person). But does this actually make a difference to performance? Dolcos and Albarracín suspected it does because it reminds us of our childhood experiences of encouragement, with people such as parents and teachers (hopefully) saying 'you can do it'.

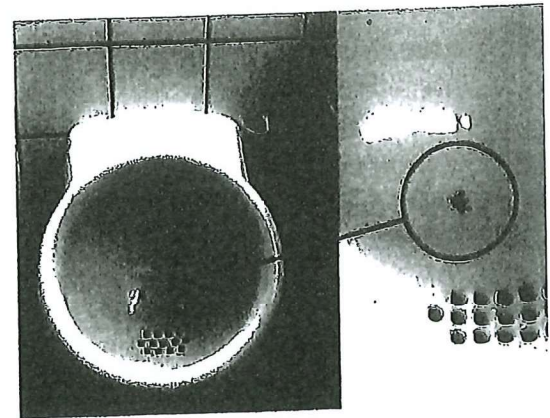
The researchers got the participants to imagine themselves to be a character in a story. Participants had to write down the advice that they would give themselves to motivate themselves to complete a task (solving a set of anagrams). Half of the participants had to write their advice down in the first person and the other half in the second person. So the hypothesis they tested was: 'There is a difference in the number of anagrams solved by the participants who used first-person self-talk and those who used second-person self-talk'.

Dolcos and Albarracín found that more anagrams were solved when second person self-talk was used (17.53 on average) than with the first-person variety (15.96 on average). This does not look like a big difference, but statistical analysis showed that it was unlikely to be a chance result.

They concluded that second-person self-talk is more motivating than first person. However, whether this is really due to reminders of encouragement in childhood can't be conclusively decided by this one study. So more research is needed to test further hypotheses in order to narrow down the range of alternative explanations.

Questions

1. Briefly outline what behaviour is being described.
2. What explanation do the researchers propose for the behaviour?
3. How could this research be used to predict and control behaviour?



Psychological literacy



You don't need lots more studies – what you need is to be able to develop your understanding (psychological literacy). So the reading is not about trying to remember anything but just to grow the psychological bit of your brain.

I have used the phrase 'psychological literacy' to try to describe being able to talk and think about psychological theories and ideas (the phrase 'psychological literacy' also means being insightful about one's own and others' behaviour and mental processes).

This ability comes from reading/watching/listening for pleasure – you are not doing it specifically to find out, for example, what the multi-store model is about or how to evaluate it. You might read about Richard Shiffrin's life on the internet and, in doing so, form a rounder and more memorable picture of the man. (Did you know that both Richard Shiffrin and Elizabeth Loftus studied Mathematical Psychology for their first degree?)

You create meaning and that makes the theory more memorable.

You might read one of the books on this spread and doing so allows you to process different aspects of the psychology you have learned – for example you might think about what the experience of having a mental disorder actually feels like.

The point is that none of these will contribute directly to your exam performance (well, some of them might a little bit) but what they will do is help you think more deeply about what and how people think and behave. It will also improve your ability to express yourself on these topics.

Watch

12 Angry Men (1957)

12 jurors decide on the guilt of an 18-year-old Latino. Deals with prejudice, conformity, minority influence.

A Beautiful Mind (2001)

Based on the life of mathematical genius John Nash who experienced a schizophrenic breakdown.

Listen

Great for those of you who are joggers. Search for 'Psychology podcasts' – there are hundreds of them.

BBC RADIO 4

All in the Mind (presented by Claudia Hammond)

Current developments in psychology, and revisiting popular ideas. Over 200 episodes available on the website.

Mind Changers (also presented by Claudia)

Looking at classic theory and studies, such as Carl Rogers' ideas or locus of control research.

The Life Scientific (presented by Jim Al-Khalili)

Occasionally includes psychologists (e.g. Francesca Happé on autism) but generally gives a great sense of how people developed their careers and what it is like to be a scientist. Heather Koldewey reported that she had always wanted to be a vet but did not get the grades she wanted – and ended up in marine biology with a bright future.

Tom Prater likes watching films:

Films helped me remember aspects of psychology through the context of the stories.

Good Will Hunting (1997)

Will experienced abuse and privation as a child and the film shows how he comes to realise his full potential.

Frances (1982)

Actress Frances Farmer had a troubled life. As an adult, Frances's mother placed her in a psychiatric hospital where she was given ECT and a lobotomy. (She also wrote her autobiography, *Will there really be a morning?*)

Memento (2000)

Leonard Shelby loses his memory after a head injury caused when trying to stop his wife being murdered. He writes notes all over his body to remember clues which will help him catch the murderer.

Rain Man (1988)

Dustin Hoffman plays an autistic man with special talents whose brother decides to take him out of the institution on a road trip.

Hope Hopkinson considers the benefit of applying psychological insights to film content:

I think with the theories in particular I found that I understood them most when I could apply them to either my own life or things I saw in the media. For example, I'd be watching a film about some sort of conflict and find myself identifying the ingroup/outgroup dynamics and it playing into how I'd think about the film as a whole! It doesn't have to be something you try to do (I definitely wasn't doing in-depth psychological analyses of everything I watched on Netflix!) but I found that, if I was watching TV after a day of revision, I'd just think about it anyway, and it really helped to put the theories in real-life contexts.

Mandy Wood, psychology teacher, says:

Being able to express yourself in written language (literacy) comes from reading books and magazines – not flicking through websites. It affects the coherence and fluency of what you write. This is especially important if English is not your first language.



Read

Non-fiction

***Bad science and Bad pharma* (Ben Goldacre)**

Will open your eyes to what is wrong with much popular so-called research and give you a clearer idea of what science is all about. See badscience website.

***Bounce* (Matthew Syed)**

Easy reading, book about dealing with failure.

***Doctoring the mind: Is our current treatment of mental illness really any good?* (Richard Bentall)**

Good coverage of what's wrong with the medical approach.

***Love at Goon Park: Harry Harlow and the science of affection* (Deborah Blum)**

Interesting insight into the man and his research – it is said that psychologists often investigate the aspect of life that is most troubling to them and for Harlow it was love and affection.

***Opening Skinner's box* (Lauren Slater)**

A detailed look at ten classic studies including Loftus, Milgram and Rosenhan. There have been criticisms of some of Slater's claims but it is an interesting read.

***Quirkology* (Richard Wiseman)**

Richard explores questions such as 'What is the funniest joke in the world?' and 'What's the best first date to go on if you want someone to fall in love with you?'. He answers these questions using psychological research. It's a fun read but also really useful for thinking and evaluating the research methodology used.

***Sex, lies and brain scans* (Barbara Sahakian and Julia Gottwald)**

This book looks at fMRI and what it reveals about what is really going on in our minds. It covers topics such as how neuroscience impacts society, and the use of fMRI in marketing. It's a really interesting read about a swiftly advancing area of psychology.

***The psychopath test* (Jon Ronson)**

Ronson sees whether psychopathy can be diagnosed with a test, and whether the label really means something.

***The Red Queen: Sex and the evolution of human nature* (Matt Ridley)**

Fabulous explanation of sexual selection and evolution, with astonishing examples for nature lovers.

Magazines

Psychology Review, published four times a year with articles by well-known psychologists on the topics you study, but also exam advice and wider interest – such as 'Science of the thrill', all about designing rollercoasters (www.hoddereducation.co.uk/psychologyreview).

The Psychologist, monthly magazine published by the British Psychological Society, £12 a year for students (www.bps.org.uk/join-us/subscribe-bps).

BPS Research Digest (digest.bps.org.uk).

BPS The ultimate psychology reading list (thepsychologist.bps.org.uk/ultimate-psychology-reading-list).

Fiction

***Frankenstein, or the Modern Prometheus* (Mary Shelley) and also many films (some true to the actual story)**

Frankenstein creates a monster, a tale that reflects 19th century fears of the potential outcomes of scientific research.

***Lord of the flies* (William Golding) and films (1963 and 1990)**

Schoolboys marooned on an island become savages – an exploration of what true human nature might be.

***One flew over the cuckoo's nest* (Ken Kesey) and a film (1975)**

Criminal Randle McMurphy opts for a 'sentence' in a psychiatric hospital instead of prison, and tries to rebel against the institution. Insights into 1960s institutional regimes.

Case studies

***A real boy: How autism shattered our lives and made a family from the pieces* (Christopher and Nicola Stevens)**

A memorable account by the parents of an autistic child that will provide a context to your learning, giving autism a face and a family, helping you to learn about autism, first-hand.

***As nature made him: The boy who was raised as a girl* (John Colapinto)**

The story of a boy whose penis was burned off in infancy and the development of his gender identity. Psychologist John Money believed gender was a matter of socialisation and stepped in to 'help' the boy.

***Genie: Escape from a silent childhood* (Russ Rymer)**

The extraordinary tale of the girl tied to a chair for much of her early life and an analysis of what happened after she was found. Provides insights into the effects of privation and also the ethics of psychological research (Genie's mother sued the psychologists).

***Memory's ghost: The strange tale of Mr. M. and the nature of memory* (Philip J. Hills)**

Mr. M (HM) lost the ability to form short-term memories when parts of his hippocampi were removed. This is a record of his life, including how he was studied by psychologists.

In one study, Christy Whitten *et al.* (2016) found that students who read for pleasure averaged higher grades than non-reading students.

Textbooks

***Research methods and statistics in Psychology* (Hugh Coolican)**

A complete explanation of everything in the Research methods topics by the man who understands everything there is to know on the subject. This is now in its 7th edition.

***Psychology: The science of mind and behaviour* (Richard Gross)**

The grandfather of all textbooks, first published 30 years ago and, as of July 2020, in its 8th edition. It is a great resource as a back up for your textbook, or just for reading about other areas of psychology.

Richard recommends ***Psychology and common sense* (R.B. Joynson)**. The 'common sense' of the title refers to human beings' internal self-understanding as distinct from the external, objective, detached approach of scientific psychology. A fundamental debate which all students of psychology should be familiar with.

