

Year 11 Psychology Transition Booklet

Developing your skills in Psychology

TASK	DATE DUE	WORK COMPLETED
Collecting data		
Analysing data		
Drawing a conclusion		
Using revision cards effectively		
Taking notes in lessons		
Exploring Psychology outside of lessons		

Task 1- Collecting Data

A psychologist called Miller proposed that **short-term memory** had a **capacity** of between 5 and 9 items. This means that we can only hold about this many items in our mind at once. You will need to design a study to test this theory. You will need to prepare a list of ten words which you can ask 10 participants to remember.

AIM: To investigate the capacity of short-term memory and test Miller's theory that it is between 5 and 9 items

Designing your experiment

Should all participants see the same list of 10 words?

Should all participants see the list of words for the same amount of time?

How will you present the list of words to the participants?

What equipment will you need for this experiment?

Will you use 10 long words or 10 short words or a mixture of both?

Should you make sure all participants are in a quiet environment?

How long should participants have to recall the list of words?

How will you recruit your participants?

Thinking about all of the questions above, write a procedure below explaining how you will be doing your experiment. It should be detailed enough for anyone who reads it to be able to carry out your experiment exactly the same way you carried it out.

SAMPLE: Explain how you recruited your sample, how many participants used and the age range of participants. **DO NOT name participants- to be ethical we need to refer to them as Participant 1 and Participant 2 etc.**

RESULTS: Calculate the mean number of words recalled by each participant and the range and write in the table below.

Mean number of words recalled	
Mode number of words recalled	
Median number of words recalled	
Range of data	

CONCLUSION: What did you find out about the capacity of short-term memory? Did your findings match what Miller proposed in his theory?

DISCUSSION: What strengths and weakness can you identify with the way you carried out this research?

Task 2- Analysing Data

Experiment 1



A Psychologist aimed to investigate if school pupils obey male teachers more than female teachers. They got a male teacher to go into the playground one lunchtime in a primary school and ask children to line up in the middle of lunchtime. They measured how many of the children obeyed the instruction within the first 5 minutes. The next day, they went into a different primary school and got a female teacher to go into the playground and ask children to line up in the middle of lunchtime. Again they measured how many of the children obeyed the instruction within the first 5 minutes.

The data they collected is shown below:

	Number of children in the playground	Number of children who obeyed the instruction within 5 minutes.
MALE TEACHER	207	168
FEMALE TEACHER	284	236

1. Calculate the percentage of children who obeyed each teacher.
2. Which teacher did the children obey more?

3. What conclusion can we draw from this in regard to the psychologist's original aim?

4. They used two different schools to test the theory. How might this have affected the results of the study?

5. What differences might have existed between the two teachers used, other than gender, that might also have affected the results?

Experiment 2

A psychologist aimed to test if a new anti-depressant medication was more effective than an existing anti-depressant medication. She recruited a sample of 10 participants who were on the old medication by putting up adverts in local doctor's surgeries and offering to pay participants £20 for participating in her research. The names of all 10 volunteers was put into a hat and 5 participants were chosen at random to receive the new drug.

All participants completed a rating of their mood at the start of the experiment on a scale of 1-10 (with 10 being the highest) and again after 3 months.

The results are shown below.

PARTICIPANT NUMBER	DRUG RECEIVED	BASELINE MOOD RATING (OUT OF 10)	MOOD RATING AFTER 3 MONTHS (OUT OF 10)
1	OLD DRUG	5	6
2	NEW DRUG	6	8
3	OLD DRUG	4	5
4	NEW DRUG	8	9
5	OLD DRUG	2	2
6	NEW DRUG	6	8
7	OLD DRUG	8	8
8	NEW DRUG	7	8
9	OLD DRUG	9	8
10	NEW DRUG	1	5

Complete the summary table below

	MEAN BASELINE RATING	MEAN RATING AFTER 3 MONTHS
OLD DRUG		
NEW DRUG		

1. What conclusion can the psychologist come to about which drug is most effective?

2. Participants knew they were getting either the same medication they already received or a new medication. What difference might it have made on participants rating after 3 months if they knew they were receiving a new drug?

Task 3- Reaching a conclusion

Analysing the findings of research is a key skill in Psychology. Psychologists carry out extensive research and we need to understand what they have found and how it relates to existing theories. We need to critically analyse what it suggests and then delve deeper to identify why the conclusion may be uncertain. For each of the examples below, read the theory and then the research and then write a conclusion explaining if the research supports the theory and provides evidence for the theory or if it contradicts the theory and provides evidence against for the theory. Try to then further analyse by stating “however” and identifying reasons why the conclusion drawn may not be certain. Take time to think about what you have read and look up in a dictionary any words you do not understand.

THEORY: Biological psychologists believe that physical differences that exist between men and women cause differences in their behaviour. For example, men and women have different hormones and these may affect their behaviour. One hormone that males have in greater quantities than women is testosterone and psychologists believe that higher levels of this hormone in males makes them more aggressive than females.

RESEARCH: Dabbs et al conducted an experiment to find out how testosterone levels affected the types of crimes committed by prisoners. They took saliva samples from 692 male prisoners to measure testosterone. They looked at the type of crime committed by each prisoner and their behaviour inside prison.



They found men with high testosterone levels were more likely to have committed crimes involving sex and violence and were more likely to have broken prison rules. Prisoners with low testosterone levels were more likely to have committed crimes such

as burglary and drug offences

YOUR CONCLUSION:

THEORY: The theory of retrieval failure proposes that we sometimes forget information because we cannot access it in our mind. If we lack the cue needed to access information we can't retrieve it and therefore appear to have forgotten the information. This gives us the sense of "Oh, I know this!" The theory suggests that if we are in a different environment when we try to access the information in our mind to when we stored the information in our mind, we may not be able to access the information. So for example, if you learnt Psychology in a classroom, you might struggle to access what you have learnt when trying to retrieve the information in an exam hall because it is a different environment.



RESEARCH: Godden and Baddeley gave participants a list of 16 words to learn. There were 4 conditions: learn the words underwater and recall them underwater, learn the words underwater and recall them on the beach, learn the words on the beach and recall them underwater, and learn the words on the beach and recall them on the beach



	Learn on beach	Learn under water
Recall on beach	13.5	8.5
Recall under water	8.6	11.4

Participants remembered more words on average if they learnt them and recalled them in the same location. This was regardless of whether they learnt them on the beach or underwater.

YOUR CONCLUSION:

THEORY: Biological Psychologists propose a theory that a disorder, such as OCD, is passed on in the genes. This means an individual inherits a gene from either or both parents that pre-disposes them to developing OCD meaning they have a higher than normal likelihood of developing OCD.

RESEARCH: Pauls et al (1995) carried out a family study into individuals with OCD and their families. He compared the prevalence of OCD within family members of an individual with OCD to the prevalence of OCD in the general population. He found that the general prevalence of OCD amongst the population is 1.9%. However, when investigating OCD in relatives of an individual with OCD, he found that the prevalence of OCD was 10.3%.



YOUR CONCLUSION:

THEORY: Psychologists have researched the topic memory extensively and have concluded that our memory of events is susceptible to manipulation by external events, meaning that when we store a memory it may contain inaccuracies and some of these may have been caused by things said to us as we process what we have seen and store it. One way our memory may be distorted may be through leading questions where a question asked to us may contain information that then changes how we remember what we have seen.

RESEARCH:

Loftus and Zanni (1975) carried out a laboratory experiment where participants were shown video clips of a car accident. Participants were then asked a series of questions including being asked either if they had seen “a broken headlight” or if they had seen “the broken headlight”. There was no broken headlight in the videos they had watched.

They found that participants who were asked if they saw “a” broken headlight were less likely to recall seeing a broken headlight (only 7% of participants asked this question recalled seeing a broken headlight) compared to participants who were asked if they saw “the” broken headlight (17% of participants reported seeing a broken headlight)



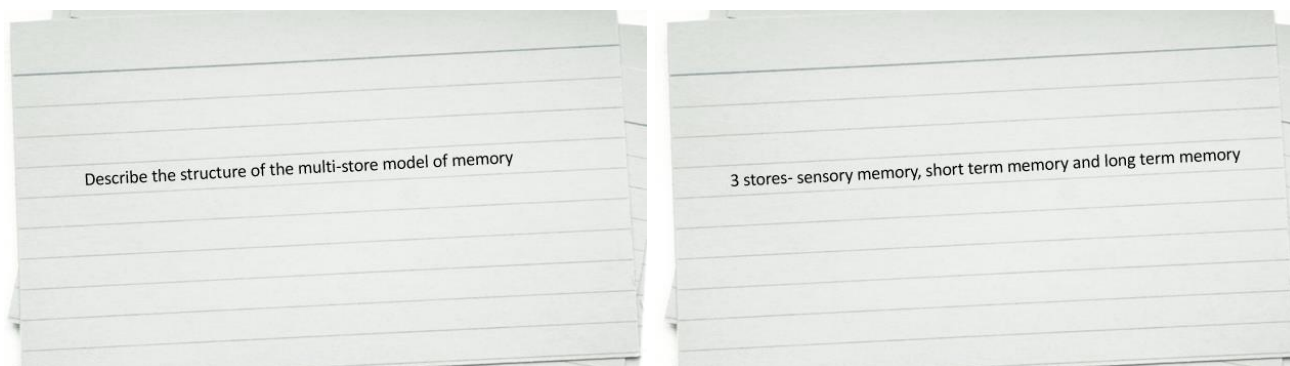
YOUR CONCLUSION:

Task 4- Using Revision Cards Effectively

Research in Psychology tells us a lot about the most effective ways to revise information. **It is important to know NOW that revision is part of your ongoing learning and not something you do just before you start your exams.** Psychologists have shown that regular **retrieval practice** or testing yourself regularly helps retain information in your mind. As you move through your A level courses and are taught large amounts of information, you need to be regularly testing yourself on learnt material in order to strengthen and retain the knowledge in your mind. If you do not do this, information in your long term memory quickly decays and then you have to work hard to put the information back into your mind. Revision cards can be an effective method for doing this as long as you use them properly.

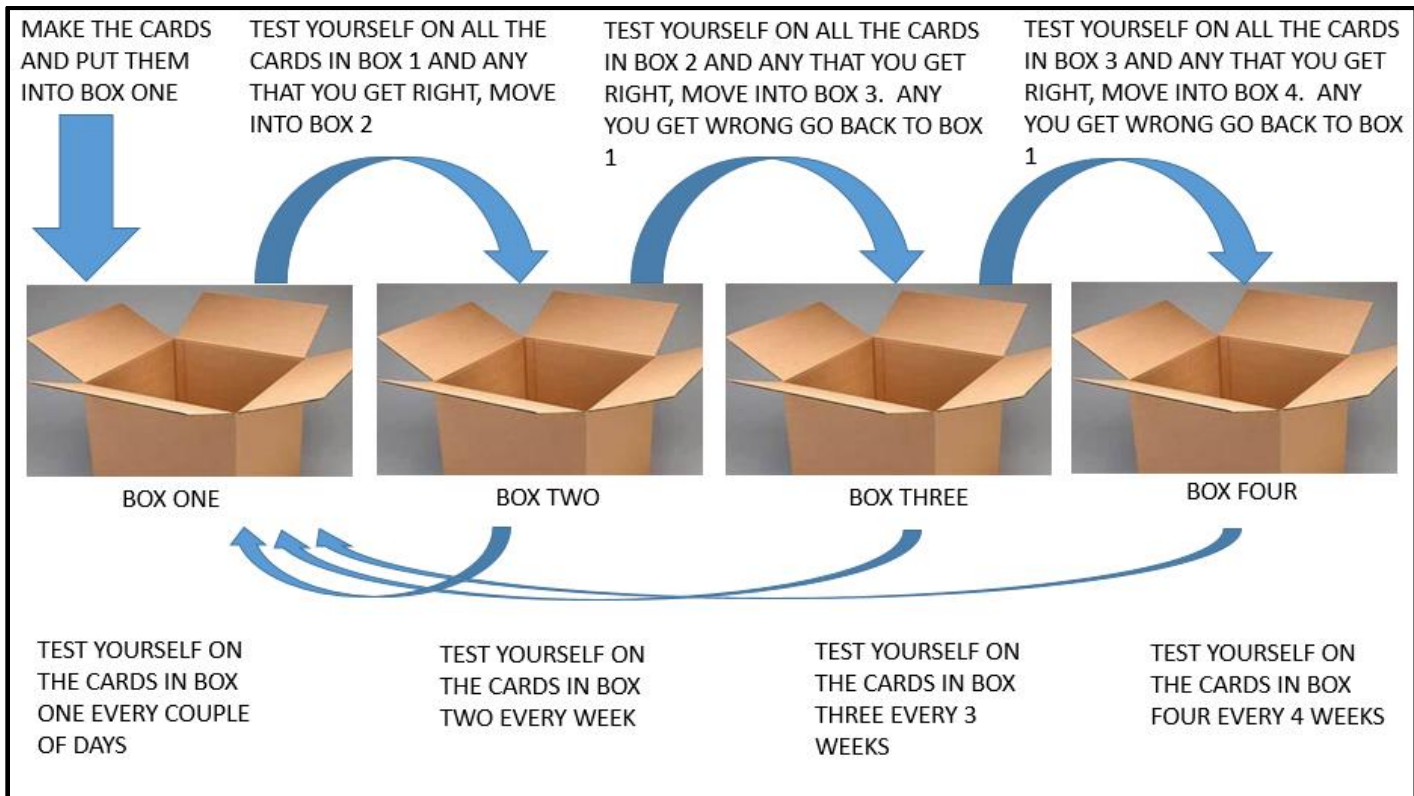
Guidelines for using revision cards effectively:

- 1) Make the cards as you are learning, either lesson by lesson or week by week. Often students make these when they start revising for exams and this eats into time that should be spent revising and usually there are then so many to make, the task feels overwhelming
- 2) Do not put too much information on the card. An effective revision card contains a concise summary of information that can be used for quickly testing yourself on knowledge.



- 3) Don't just focus on key words. Definitions of key words in Psychology is important but you need more detailed knowledge to answer exam questions effectively. Include key words but also questions that require recall of more detailed knowledge. Try to breakdown your notes into a series of questions and answers, each of which can be added to a revision card. For example, you could breakdown your learning on the multistore model of memory into questions such as:
 - a. Which psychologists proposed the multi-store model of memory?
 - b. What is the structure of the MSM of memory?
 - c. How does information move through the stores in the MSM of memory?
 - d. Describe the capacity of the stores in the MSM of memory
 - e. Describe the duration of the stores in the MSM of memory
 - f. Describe the coding of the stores in the MSM of memory
 - g. Describe a study that supports the MSM of memory, explaining why it supports the model (you could make more than one of these if you want to learn more research support)
 - h. Identify strengths of the MSM of memory
 - i. Identify weaknesses of the MSM of memory
- 4) Once you have made revision cards, the most important thing is to **use these regularly**. A really useful system to use involves having different pouches or boxes for these cards. Box one contains all the cards when you have

first made the cards. When you test yourself on box one, any that you get right get put into box two and the rest remain in box one. You should re-test yourself on box two about a week later and any you get right again move to box three and any you don't get right go back to box one. Finally, you should test yourself on box 3 every 3 weeks and move any that you still get right to box 4 which will contain cards that you only need to test yourself on about every 6 weeks (once a school term). Any that you get wrong from any box go back to box one.



Your task this week is to make revision cards on everything you have done in Psychology so far and bring them in so your teacher can review them.

Task 5- Taking Notes in lessons

Taking notes in lessons is a key part of A level learning. The temptation is to write down every word you see presented on the board. However, by simply copying notes down you do not think as hard about the meaning of what you are writing down and are less likely to retain the information. By using a slightly different format in taking your notes, you can force your brain to think harder about the lesson content and as it processes the information at a deeper level, it is more likely to be remembered. As this note taking technique also requires you to re-visit and summarise the content of the notes (make sure you do this as soon as you can, ideally on the same day) then this rehearsal of the lesson content will again help you remember the information.

The strategy you will try is called “cornell notes” and if you do a quick internet search, you can find a lot of information available online to help you research this technique and even find word templates if you wish to make any electronic notes outside of lessons.

Watch the video: <https://www.youtube.com/watch?v=ErSjc1PEGKE>

How To Take Cornell Notes Properly (Video)

Use this format in **ANY TWO** of your lessons this week. Concentrate on completing the main bulk of the notes section in the lesson and then reviewing and adding the main points and the summary after the lesson. You will need to show your teacher the notes you have made.

Task 6- Exploring Psychology Outside of Lessons

To drive your interest of your subjects and assist your broader understanding of your learning, it is a good idea to spend some time exploring your subject outside of lessons in different ways.

There are a lot of Ted Talks covering broad areas of Psychology.

This Ted Talk https://www.ted.com/talks/matt_walker_sleep_is_your_superpower is really useful for learning about the brain but also about your own learning.

Ted Talks has a Psychology playlist and you could watch anything that interests you

<https://www.ted.com/topics/psychology>

If you like reading, there are many fascinating books about Psychology. The website below contains a list of books you could read

<https://www.topuniversities.com/courses/psychology/8-books-read-if-youre-psychology-student>

Psychology textbooks may be useful to read about material covered in lessons or to read ahead prior to lessons in order to prepare for new learning. Please ensure you have the access details for the online textbook.

There are many websites that contain notes on Psychology tailored to the course you will be studying.

<https://www.simplypsychology.org/a-level-psychology.html> contains notes on all areas of the specification.

<https://psychologyhub.co.uk/> also contains notes focused on the A level course you are studying.

The exam board website <https://www.aqa.org.uk/subjects/psychology/as-and-a-level/psychology-7181-7182> contains vital reference material including the specification (what you need to know), past papers and mark schemes and examiners reports which explain the common mistakes students make in their exams that may prevent them accessing higher marks.

Your task this week is to explore these resources and complete the following tasks:

- 1) Write a short summary about the benefits of sleep that you have identified from the Ted Talk referenced above
- 2) Using the Simply Psychology website, in the topic Research Methods, what is a definition of a lab experiment?
- 3) Using the Psychologyhub website, in the topic Memory, identify two differences between a standard interview and a cognitive interview
- 4) Read on the AQA website the examiner's report **Examiner report (A-level): Paper 1 Introductory topics in psychology - June 2018** (found in the past papers and mark schemes section) and identify the top 3 commonly occurring specific errors students made in their Psychology exams

This is a detailed and comprehensive assignment that you have been given. Do not rush it. We advise that you complete different parts of the transition pack at different points in the Summer holiday, rather than leaving it all until the final week of your break. You should expect to spend longer on these tasks than any homework you have completed before. A Level Psychology will be a significant step up from the work you have completed in Year 11.

Task One – Approaches in Psychology

There are some core approaches to Psychology that you need to know for your A level – they are different ways of explaining human behaviours. Some of these are listed below: your job is to do some research on them using the internet (Wikipedia, while sometimes untrustworthy, is very good for this! There are also plenty of great videos on YouTube you can watch). You should find out: what does this word mean? How might it explain human behaviour? Identify one key researcher from this area – and why are they famous?

The Behaviourist Approach

The Social Learning Theory Approach

The Cognitive Approach

The Biological Approach

The Psychodynamic Approach & Humanistic Approach

Task Two – Psychological History

You need to create an A4 Psychological History timeline. On your timeline you should include a number of features such as the ones below (but not necessarily ONLY these). To make a high quality timeline, you will need to do some additional research into what each of the events actually refers to – and why it might have been important to the development of Psychology.

The Curious Case of Phineas Gage, Wilhelm Wundt's Psychology Lab, foundation of the American Psychological Association, Sigmund Freud publishes "*The Interpretation of Dreams*", Pavlov's Dog Studies are published, Carl Rogers publishes "*Counselling and Psychotherapy*", the first use of a brain scan in Psychological research.

This will be the focus of the first topic we will study next year. A great link for this task is <https://allpsych.com/timeline/>.

Task Three – Psychology Today

Psychology is still a developing subject, with new research and information being revealed every single day. As keen young Psychologists, you need to keep abreast of new information. Twitter is seen by some to be the future of social science – it is used by researchers, academics and other social scientists alike to share news and information as well as discuss issues. I would advise that you create yourselves Twitter accounts as soon as possible and follow the below users for information and news:

@PsychToday (Psychology Today magazine)

@tutor2uPsych (Tutor2U's Psychology feed)

@ResearchDigest (the British Psychological Society's Research feed)

@Psychmag (The Psychologist magazine)

Your second task is to keep an eye on these Twitter accounts (as well as wider sources – the news and shows on TV, newspapers and others – there are loads of fantastic movies and documentaries that you can watch for Psychology!) over the Summer holidays and make a note of any particularly interesting news that is relevant to Psychology.

Task Four – Researching Psychological Disorders

Your final task is to explore some psychology in the real world by looking at two of the following disorders. For each, you should create a short fact file: what is the disorder? What are the psychological causes? How do psychologists treat this disorder? Choose two to complete, but if you like you can complete more! The disorders are:

Depression

Obsessive-Compulsive Disorder (OCD)

Dissociative Identity Disorder (DID)

Anorexia Nervosa

Schizophrenia

Agoraphobia

Antisocial Personality Disorder (APD)

Obesity

Do Leading Questions influence the accuracy of our memory?

Task: Imagine you are a cognitive psychologist interested in studying the effects of leading questions on Eyewitness Testimony.

You must re-create Loftus's original experiment on the effects of leading questions on estimating the speed a car is traveling at.

Instructions:

Phase 1: Experiment prep

- 1) **Prepare your questions for the test:** You'll need a series of 3 or 4 random questions about the car crash video and one of those questions will be your critical question which is the leading question.
- 2) **Recruit your participants:** They'll need to be split into 5 groups as each group should be presented with the random question including one of the following 5 critical questions:



Participants were in one of five different conditions:

- Group 1: Asked 'How fast were the cars going when they hit each other?'
- Group 2: Asked 'How fast were the cars going when they contacted each other?'
- Group 3: Asked 'How fast were the cars going when they smashed into each other?'
- Group 4: Asked 'How fast were the cars going when they bumped each other?'
- Group 5: Asked 'How fast were the cars going when they collided into each other?'

- 3) **Control condition:** Every experiment needs one of these; this will be your sixth group of participants. This group of participants should be given the same series of random questions and question **'How fast do you think the cars were going'**- this question has no leading element to it.
- 4) Write an **alternative hypothesis** which will be used to test the theory that leading questions do affect our memory. You might state that there is a difference between different leading questions on memory or you might more specifically believe certain types of leading questions will influence memory more than others.
- 5) Write a **null hypothesis** for your study.
- 6) Write a **consent letter** that you'll distribute to all of your participants. This includes details of ethical issues that you will follow and what will be required of the participants in your investigation.
- 7) Write a set of **standardised instructions** that you will read to the participants so that each participant knows what they'll be doing in the experiment. One thing you'll need to remember – will you have your participants

give their answers in kilometers per hour or miles per hour? Make a decision and stick to one (this will help in your results section!) Remember – do not give away the fact that one of the questions is a leading question! That's the whole point of the study!

- 8) **Carry out the study on participants.** You'll need six groups – 5 experimental groups and 1 control group. Each group can have approx 2-3 participants to make things simpler (but if you can get access to more participants that's even better!)
- 9) Write a **debrief letter** that you'll distribute/or read out to your participants at the end of their participation in the experiment. In this letter, you should thank you participants for taking part, some

info about the study and why you conducted, a reminder of their rights as participants and an opportunity to ask questions if they have any. There are lots of great examples of debriefs online!

Phase 2: Gathering your results/data:

- 1) Collect your data from your each participant on their speed estimate.
- 2) Create a table like the table here for your results showing individual speed estimates

Participant number	Group 1 estimate	Group 2 estimate	Group 3 estimate	Group 4 estimate	Group 5 estimate	Control condition estimate
1						
2						
3						
4						
5						

- 3) Calculate the mean score for the data that you have collected and write this at the bottom of your table.

Phase 3: Reflection sheet:

- 1) Draw a bar chart of your results. Don't forget to label your axes and include a detailed title
- 2) What do the mean values from each group show about leading questions? Which particular leading question was given the greatest mean speed estimate?
- 3) Which hypothesis – the alternative or null – have you accepted and why?

Phase 4: Project finale and write up

- 1) This part of your project is your final write up – show off your best presentation skills. Use the following checklist to inform your journal write up.

Effects of learning questions on eyewitness testimony project checklist (A-G)	Tick if complete
a. Front cover with title and group names	
b. Contents page	
Introduction section: This should include: background information about Eyewitness testimony and Loftus research inc. any other researchers you come across in your reading. Aim and Hypothesis (alternative and null) of your research	
Methods Section: This should include Sample: Number and information of participants e.g. gender, age etc 2. Apparatus: Your questionnaire, your rating scale 3. The set of standardized instructions you used 4. Ethics: A copy of you informed consent letter and debrief letter.	

<p>Results Section: This should include the results A graph to show your results</p>	
<p>Conclusion section: This should include: 1. What do the mean values from each group show about leading questions? Which particular leading question was given the greatest mean speed estimate? Which hypothesis will you accept? Explain your answer.</p>	
<p>Evaluation section. This should include: A small discussion on the STRENGTHS and WEAKNESSES of your study If you had the chance to carry out your study again, what you would do differently.</p>	

Maths in Psychology

In Psychology about 10% of the marks available are maths skills – in terms of overall marks this equates to about a grade. The Maths skills are an equivalent level to that of Higher GCSE Maths/Stats– this booklet is to help you become more familiar with some of the mathematical content that you will need to know for the course.

1) Standard form:

Sometimes psychologists will come across very large or very small numbers. Because of the nature of very large numbers, it is often necessary to simplify these using shorthand, this is known as standard form.

Write in standard form

a) 70×10^5

b) 40×10^5

c) 0.8×10^6

d) 0.4×10^8

e) 0.3×10^8

f) 0.7×10^6

g) 150×10^4

h) 480×10^2

i) 0.044×10^5

j) 0.073×10^7

2) Rounding to decimal places

Round to 1 decimal place a) 0.374

b) 0.798

c) 0.393

d) 0.584

Round to 2 decimal places e) 0.136

f) 0.138

g) 0.464

Round to three decimal places h) 29.9757

i) 46.2317

j) 79.0919

Round the numbers in the table.

Number	1 decimal place	2 decimal places
0.181	0.2	k)
8.928	l)	m)
0.4923	n)	o)
45.7053	p)	q)

3) Rounding to significant figures

Round to 1 significant figure

- a) 15
- b) 983
- c) 0.0097
- d) 1.9

Round to 2 significant figures) 0.133

- f) 0.0403
- g) 90054

Round to 3 significant figuresh) 0.6402

- i) 160.7

Round the numbers in the table.

Number	1 significant figure	2 significant figures	3 significant figures
4.915	5	j)	k)
5253	l)	m)	n)
197.196	o)	p)	q)
0.4063	r)	s)	t)

4) Using percentages, fractions and decimals

Convert to a decimal

1

—

2

3

—

40

c) 65%

d) 153%

e) 51.6%

f) 41%

Convert to a fraction, reduced to simplest form

g) 0.2

h) 0.62

i) 90%

Convert to a percentagej) 0.87

k) 2.11

l) 0.017

m) 2.91

$\frac{9}{10}$

$2\frac{2}{5}$

—

Convert to a fraction:

p) 67%

Sample Question

Look at the pie chart below What fraction of divorced adults had a type B attachment?

A pie chart to show the distribution of infant attachment types of divorced adults



- A. $\frac{1}{5}$
- B. $\frac{3}{10}$
- C. $\frac{2}{5}$
- D. $\frac{1}{2}$

5) Ratios

Simplify

- a) 5 : 10
- b) 15 : 5
- c) 5 : 50
- d) 52 : 56
- e) 52 : 12
- f) 52 : 56
- g) $\frac{18}{12} : \frac{22}{12} :$
- h) $\frac{16}{48} : \frac{52}{48} :$
- i) $\frac{42}{24} : \frac{15}{24} :$

Sample question

The findings from the study are presented below:

A table to show the number of participants who perceived the ambiguous image as a monkey or as a teapot from both conditions: image presented with animals and image presented with kitchen items.

	Perceived as a monkey	Perceived as a teapot
Presented with animals	15	10
Presented with kitchen items	5	12

- a) Identify and simplify the ratio of the number of participants who perceived a monkey in the first condition and the number who perceived a monkey in the second condition.
- b) Identify and simplify the ratio of the number of participants who perceived a teapot in the first condition and the number who perceived a teapot in the second condition.

6) Measures of Central tendency.

- a) Find the mean of the data given below.

6 6 1 2 1 8

mean =

- b) Find the mean of the given data below, rounding your answer to the nearest whole number.

11 12 28 17 21 24 27

mean =

- c) Find the mean of the given data below, rounding your answer to 1 decimal place

11. 4. 16. 18. 12. 3. 2. 25. 10. 0.
9 8 4 2 3 6 8 6 8 6

mean =

- d) Find the median of the data given below.

15 20 10 15 14 23 14

median =

e) Find the median of the data given below.

20 13 10 20

median =

f) Find the median of the data given below.

23.1 11.1 13.1 30.9 13.5 18.1 14.1 0.3

median =

g) Find the median of the data given below

26.3 18.6 8.8 23.2 29.3 20.9 1.5 0.2

median =

h) Find the mode of the data given below.

1 4 6 2 10 11 12 8 10

mode =

i) Find the mode of the data given below.

9 2 4 3 6

mode =

j) Find the mode of the data given below.

8 6 5 3 3 6

mode =

Sample question

A Psychologist investigated whether recall was affected by the way the material was presented. One group was given pictures to recall, the other group were given words.

Number of Pictures Recalled	Number of Words Recalled
7	4
5	6
10	7
8	5
7	6
5	5
7	9
9	3

Calculate the measures of central tendency for the following set of raw data.

Condition 1 (Numbers of pictures recalled)

- a) Mode =
- b) Median =
- c) Mean =

Condition 2 (Number of words recalled)

- d) Mode =
- e) Median =
- f) Mean =

7) Displaying Data

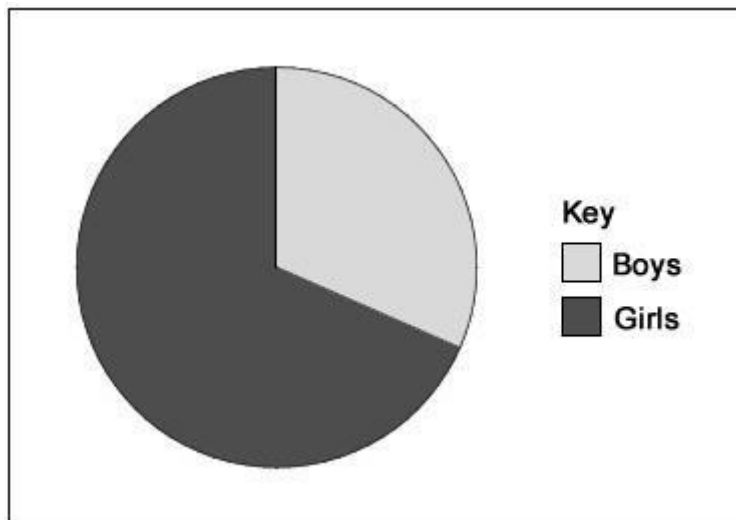
Graphs, charts and tables are all used to describe data and make it easier for the data to be understood.

There are a number of graphs and charts that you need to be able to draw and interpret, they include:

- Tally chart (frequency table)
- Line graph
- Pie chart
- Bar chart
- Histogram
- Scatter diagram
- Sample questions

A researcher is investigating gender differences in classification of attachment. They conduct a study using Ainsworth's 'Strange Situation'. The results are shown in the figure below.

The proportions of boys and girls who are classified as securely attached



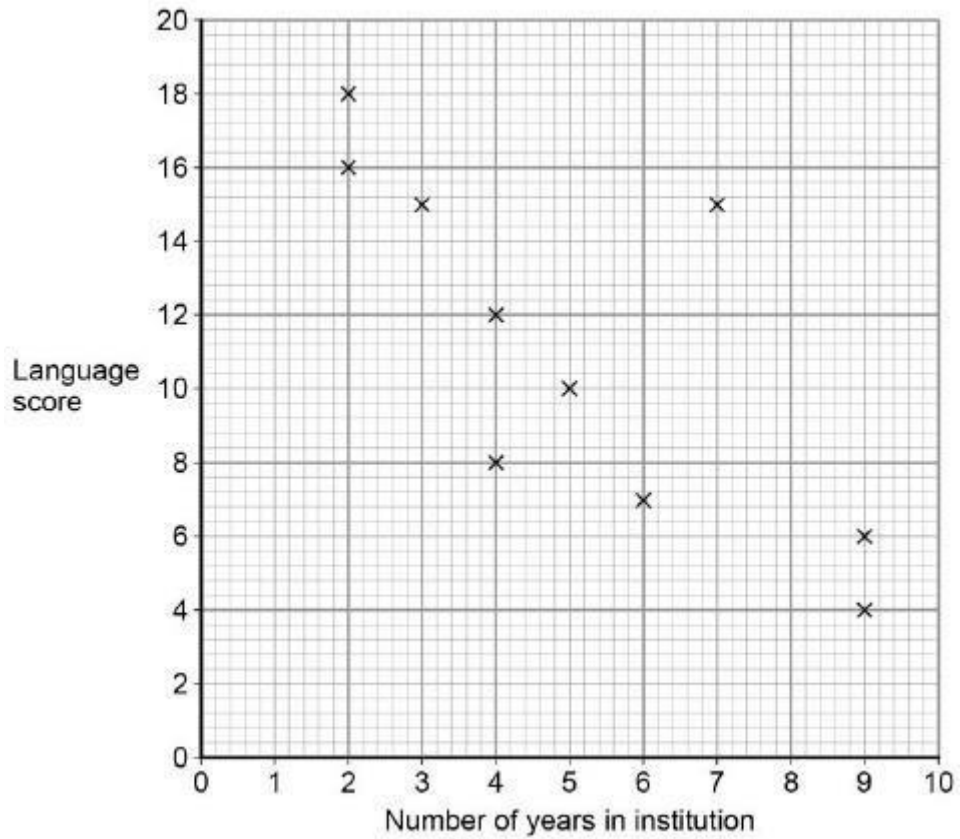
- (a) Using the information in the figure, estimate the percentage of **boys** and **girls** that are securely attached. (2)

Boys = Girls =

- (b) In a different study, 150 children were classified as securely attached. Of these, 40% were boys. How many of the 150 children were girls? Show your workings. (2)

A psychologist thinks that there may be a link between language ability and institutionalisation. She tests the language skills of 8-year-old institutionalised children. A high score on the test indicates good language ability and a low score on the test indicates poor language ability. She also records the number of years that each child has been institutionalised. The findings are shown in the figure below.

The relationship between time spent in institution and language score



(c) Identify the type of graphical display in the figure.

- A** Histogram
- B** Bar graph
- C** Line graph
- D** Scattergram

(d) How many children took part in the study? (1)

(e) What does the pattern of data in the figure suggest about language ability and institutionalisation? (2)

(f) Calculate the range for the language scores. Show your workings.

(2)

