Introduction to Psychology

Student Workbook

Name_____

July, 2018 Edition.

IB Psychology
Course Overview

THE CORE AND PAPER ONE
Three **Core** Approaches to Understanding Behaviour • Biological • Cognitive • Sociocultural
+ HL Extensions • Animal research (Bio) • Technology (Cog) • Globalization (Sociocultural)
ASSESSMENT: PAPER ONE • Paper One Section A: Three compulsory questions (one from each approach). About 250-400 word answers. • Paper One Section B: Three essay questions (only choose one). One question from each approach. About 750 – 950 word essay.

THE OPTIONS AND PAPER TWO
One (SL) or Two (HL) Options • The Psychology of Human Relationships • Abnormal Psychology • Health Psychology • Developmental Psychology
ASSESSMENT: PAPER TWO • Three essay questions for each option. SL = one essay, HL = two essays.

RESEARCH METHODS AND PAPER THREE (HL ONLY)
• Quantitative and qualitative research methods, including sampling and ethics.
ASSESSMENT: PAPER THREE • Three sections, 5 mandatory questions • You will know exactly what the questions could be (there are only 8 possible questions).

THE INTERNAL ASSESSMENT
• Conduct your own experiment and write a report.

KEY TERMS TRAFFIC LIGHTS

Use coloured pencils or highlighters Colour the boxes below based on how well you know the key term.

- ***Green = you know it and could explain it to someone else.***
- ***Yellow = you think you know it, but you're not 100% confident***
- ***Red = you don't know it***

Term	Before we begin	End of unit	End of the course (Year 2)
Psychology			
Mental process			
Cognition			
Behaviour			
Empirical evidence			
Independent variable			
Dependent variable			
Treatment group			
Control group			
Causation			
Correlation			
Extraneous variable			
Negative correlation			
Positive correlation			
Phenomenon			
Bidirectional ambiguity			
Laboratory experiment			

Use this space to create a key if you're using different colours.

Introduction to Psychology Glossary		
Term	**Definition**	**Example/s**
Psychology	*The scientific study of individual behaviour and mental processes.*	
Mental process	*The internal tasks we perform with our minds. Examples include thinking, decision making, remembering, and problem solving.*	
Cognition	*Another term for mental process and means the same thing.*	*See above.*
Behaviour	*An observable action. Although in IB Psychology it means actions and mental processes.*	
Empirical evidence	*Evidence that has been gathered using observation and/or experimentation.*	
Independent variable	*The variable in a study that the researcher manipulates in order to create different conditions for comparison of effects.*	
Dependent variable	*The variable that the researcher measures. It is the effect of the IV.*	
Treatment group	*The group that receives a treatment that is hypothesized to have an effect.*	
Control group	*A group in an experiment that receives no treatment, so comparisons can be made with the treatment group and conclusions drawn about the effect/s of the treatment.*	
Causation	*When one variable directly causes a change in another.*	
Correlation	*When two variables are related to one-another in that as one increases or decreases, so does the other.*	
Extraneous variable	*A variable that **could** influence the DV but is not the subject of study.*	
Negative correlation	*As one variable increases, the other decreases.*	
Positive correlation	*As one variable increases, so does the other.*	
Phenomenon	*Anything that has been observed to commonly occur. In other words, it's something that we know happens a lot, and often there might not be an obvious explanation.*	
Bidirectional ambiguity	*When there is a correlational between two variables and there is uncertainty about which variable is influencing which.*	

Write down everything that comes to mind when you think about “psychology.”

PSYCHOLOGY

Topic 1: Introduction to Psychology

- What is psychology?

Lesson (a): Evolution and Behaviour

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is the definition of psychology? 2. Why do psychologists study behaviour *and* cognition? 3. What are some examples of blurred distinctions between what is "behaviour" or "cognition"?

Behaviour and Mental Processes

1. In your group, brainstorm as many individual human behaviours and mental processes as you can think of. Then try to categorize them in the table below.

Behaviours (Observable action)	Mental Processes (Internal)

Both/Either?

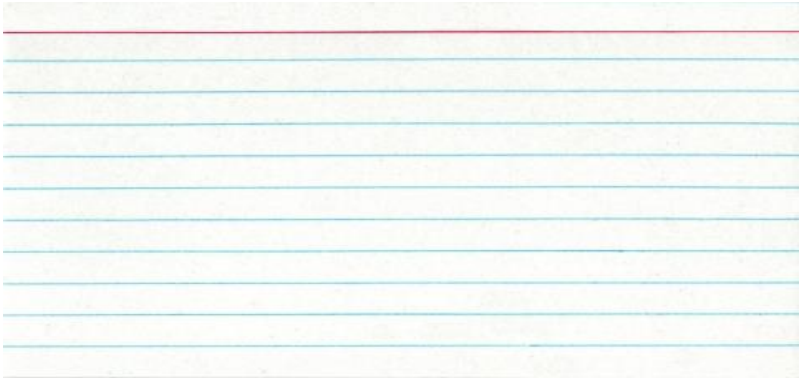
GQ: Why do psychologists study behaviour and cognition?

Lesson (b): Studying Individuals

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is a "social science?"? 2. How is psychology different to other social sciences, such as anthropology and sociology? 3. How might a biological study of the brain differ from a psychological one?

Brainstorm

In the space below, write all the examples of violence you can think of. An example could be "bullying."



Answer the following guiding question *after* completing the activity on the next page.

GQ: How is psychology different from other social sciences, such as anthropology and sociology?

To use religion as an example, an anthropologist might study the contents of a religion (e.g. beliefs, practices, rituals, etc.), a sociologist might study how a religion influences social structures (e.g. class systems and hierarchies), and a psychologist would study how religion can affect the behaviour of individuals within that religion.

Instructions

Read the following summary of a study conducted in the United States and answer the question that follows.

Culture of Honor Study (by Cohen et. al. 1996)

The states along the eastern coastline of the United States are generally divided into the "Northern" and "Southern" states. The Southern states are regarded as more violent and this is also supported by statistics. For example, homicide (murder) rates are higher in the south than they are in the north. There are many possible reasons for this difference in the level of violence. One explanation has to do with the "culture of honor." Dov Cohen and his colleagues hypothesize that white males in the Southern states place a higher emphasis on maintaining their honour, which means when they are threatened by someone they feel they should stand up for themselves. In other words, they don't want anyone to push them around. This could lead to Southerners responding with more violent reactions when they are threatened, whereas people in the North might just walk away from the situation and avoid conflict.

To test this idea to see if there was a difference in reactions to threats, Cohen et al. gathered 148 white, male, college students. Half were from the north, and half from the south. The participants were told they were in a study on personality and they filled out a questionnaire. Then they were asked to walk down a long hallway to place their questionnaire on a table. Half way down the hallway, a confederate (an actor working for the researchers) bumped in to the participant (on purpose but made to look like an accident) and then the confederate called the participant an a**hole (this is the threat). After this, the participant continued walking down the very narrow hallway (wide enough for only one person) and another confederate walked towards them. This second confederate was big: 6'3" (1.91m) and 250lbs (114kg). Basically, the researchers had set up a game of "chicken" and wanted to see how close the participants would get before "chickening out" to the bigger man.

The results showed that southerners who had been bumped got much closer to the bigger man before chickening out (0.94m) compared with northern participants (2.74m).

Question: What conclusions can we make about violence and a "culture of honour" from this study? Write your answer in the lines below.

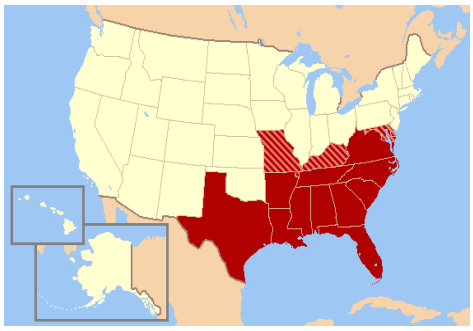
_____

_____

_____

_____

_____



The southern states are those coloured in red. We will learn more about the culture of honour in our unit on criminology.

Lesson (c): Psychologists are Scientific

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is "a scientific approach?" (aka the scientific method). 2. Why is a scientific approach important when studying psychology? 3. To what extent is personal observation valuable in gaining "knowledge" in psychology?

Problem Solving

I have a problem: I'm trying to grow tomatoes in my garden and there are two types of fertilizer for sale. I want to know which one is the best to use, or is it better to use nothing. What would you do to find the answer to this question? Draw in the space below how you would answer the problem I have posed in the box above.

Answer the following guiding question *after* completing the activity on the next page.

GQ: Why is a scientific approach important when studying individual behaviour and/or cognitive processes?

Activity #2: Empirical vs. Anecdotal Evidence

Empirical evidence: Evidence that has been gathered using the scientific method, including the use of observation and/or experimentation.
Anecdotal evidence: Evidence that has been observed from someone's personal experience, or repeated from what they've heard others say.

Identify the anecdotal and empirical examples from the list below. You can highlight and/or label each example.

- An American couple who are tourists in Japan make conclusions about Japanese values by what they see while in Japan on vacation.
- Finding out if the brains of violent criminals are different from "ordinary" citizens by conducting brain scans of over 1,000 participants (violent criminals and "ordinary" people) and comparing the results.
- Making conclusions about how children should be raised by observing what happened in your own family.
- Deciding the best way to reduce crime by asking a few police officers.
- Finding out why some marriages have a higher chance of ending in divorce by studying thousands of married couples and gathering data on them over decades, finding out who divorces and who stays together.
- Finding out if a particular medication for depression works by asking someone who has taken that medication.
- Getting a group of depressed people and asking half to take a medication and the other half not to, and then seeing who has a higher reduction in symptoms of depression.
- Making conclusions about what causes PTSD based on what you see and hear on the news.

Additional Notes on Empirical and Anecdotal Evidence

What you can see from the above examples is that **anecdotal evidence** is very **subjective**, which means it could easily be influenced by our own bias. There are lots of ways that our bias can influence what we see and how we think about what we see, so this type of evidence isn't very credible or trustworthy.

For example, there's a type of bias called **confirmation bias**, which is when we tend to focus on things that are consistent with our existing beliefs. The tourists in Japan, for example, might only focus on the positive aspects of Japanese culture as before they arrived they had these ideas about Japan already. The aim of science is to remove bias and subjectivity from the process of acquiring knowledge, so we can be sure that our evidence is credible.

This is why scientists (and psychologists) try to be **objective** in every step of the research process (to be objective means you observe things from a neutral point-of-view, without your personal biases influencing your observations). Throughout this course you'll learn more about the steps psychologists take to ensure their evidence is valid and credible.

Topic 2: Psychological Studies

- How do we "know" what we know in psychology?

Lesson (a): Evolution and Behaviour

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is an independent variable and a dependent variable? 2. What's the difference between an independent variable and a dependent variable? 3. Would you consider psychology more of a natural science, or a social science. Why?

Variable: something that can change or vary. In psychology, variables are the things that can affect human cognition and behaviour. E.g. how rich your family is could be a variable that affects how people act.

Identifying Independent and Dependent Variables

Read the following brief summaries of studies from our next unit (criminology) and see if you can identify the IV and the DV. The first one has been done for you.

A.	One group were trained in mindfulness (a type of meditation) and another group received no training. The effects this had on their brain were measured using brain scans.	IV: the type of training participants received. DV: the effects on the brain.
B.	The brain activity of people with the MAOA-L gene were compared with people who had a different type of MAOA gene.	IV: DV:
C.	A group of Vietnam War veterans filled out questionnaires to measure their levels of aggressiveness. Their family members were also interviewed and asked to fill out questionnaires. Some of the veterans had damage to their brain while others had no damage.	IV: DV:
D.	One group of females were injected with testosterone and then placed in a brain scanning machine to measure the activity in their brain. Another group were also placed in the same machine but they were injected with a placebo (a substance that doesn't have any effect).	IV: DV:
E.	One group of participants drank a drink that reduced the amount of a particular chemical (serotonin) in their brain. They were then placed in a brain imaging machine. A second drink also had brain scans, but they drank a placebo (one that doesn't affect brain chemicals).	IV: DV:

Extension

Stating the aim of an experiment

The aim of any experiment is to see what effect an IV has on a DV. Therefore, to state the aim of an experiment you should include the IV and DV and state what relationship is being investigated.

Example A's aim: To see how mindfulness training can affect the brain.

In the space below, write the aims of the other experiments in the table on the previous page. Show your work after you've completed one to see if you're on the right track.

Study	Aim
A	*To see how mindfulness training can affect the brain.*
B	
C	
D	
E	

Tip: good verbs to use in an aim include: investigate, determine, examine.

This code (link) will take you to a Crash Course video that gives a brief history of Psychology as a subject.

GQ: What's the difference between an independent variable and a dependent variable?

Lesson (b): Applying Conclusions

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What are the four main parts of a study? (Ans: A, M, R, C)[1] 2. How does understanding relationships between variables assist in applying conclusions in psychology? 3. What are some limitations in conducting experiments in controlled environments?

Making Predictions

What factors might cause people to commit violent acts?

Figure 1: Violence is an interesting behaviour to study because it has many possible causes.

Group Challenge

You have 20 minutes to be able to state a conclusion for each of these four studies:

A. Grafman et al. on the brain and aggression
B. Albert et al. on testosterone and aggression in rats
C. Passamonti et al. on the influence of serotonin on the brain
D. Bandura and the effects of observation of violence

This code (link) will take you to the right blog post.

Grafman et al.
Conclusion: _____

Albert et al..
Conclusion: _____

Passamonti et al.
Conclusion: _____

Bandura.
Conclusion: _____

[1] Aims, Methods (Participants and Procedures), Results and Conclusions

Lesson (c): Causation

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is a "control?" What is a "causal relationship?" 2. How can laboratory ("true") experiments demonstrate causal relationships? 3. What are some behaviours that might be difficult to study in a laboratory?

Rememberol™

Coming soon to a pharmacy near you!

A drug called Rememberol has been developed and researchers think it will help students remember more when they're studying. If it works, it could help a lot of people and make a lot of money. But how can we test if it actually drug works?

Your Task: You and your team have to design an experiment that will test to see if Rememberol actually helps students learn more after studying.

Brain storm some ideas and jot down notes here about how you'd test this. Then write out the aim, IV and DV of the experiment in the spaces provided on the next page. Show me when you've finished.

Summary of procedures:

Aim:_____

_____

Independent variable:_____

_____

Dependent variable:_____

_____

Treatment Group:_____

Control Group:_____

Check-point: show your work before you move on…

Extraneous Variables

Working with your group, identify possible extraneous variables that could affect the results of your experiment. You can read pg. 21-22 of the textbook if you're not sure what an extraneous variable is.

Choose at least two of your extraneous variables and explain how they could be controlled. In other words, how could you make sure that they don't affect the results of one group more than the other?

Possible extraneous variables:

EV:_____
Control:_____
_____
EV:_____
Control:_____
_____

Treatment and Control Groups

Treatment group	*The group that receives a treatment that is hypothesized to have an effect.*
Control group	*A group in an experiment that receives no treatment, so comparisons can be made with the treatment group and conclusions drawn about the effect/s of the treatment.*

Activity

Identify the treatment and control groups in the following studies:

Study	Treatment Group	Control Group/s
Albert et al. on testosterone and aggression in rats		
Passamonti et al. on the influence of serotonin on the brain (Very difficult)		

GQ: How (or why) can laboratory experiments demonstrate causal relationships?

_____
_____
_____
_____

Lesson (d): Correlations

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What is a correlation? What are positive and negative correlations? 2. What is the difference between causation and correlation in psychology? 3. What is one alternative explanation for a correlation found in a study?

Activity

1) Read the summaries of following studies that might show causal *or* correlational relationships. Find the obvious conclusion first (this will probably be causal).
2) Then practice a key part of thinking critically about psychology studies, which is to see if there are ***alternative explanations***.
3) The studies can be found (here) in the blog post called "Thinking Critically About Correlations."

This code will take you to the right blog post.

STUDY	+ or –
TV and Violence • Explanation 1:_____ • Alternative: _____	
TV and Attention • Explanation 1:_____ • Alternative: _____	
Fish and Depression • Explanation 1:_____ • Alternative: _____	
Meditation and Brain Development • Explanation 1:_____ • Alternative: _____	
Candy and Crime (Moore et al, 2009, link) • Explanation 1:_____ • Alternative: _____	

Lesson (e): Psychological Theories

Key Q's *By the end of this lesson you should be able to answer these questions…*	1. What are the aims of psychological theories (and models)? 2. What do psychological theories and studies have in common? 3. How and why should we evaluate psychological theories?

A Thousand Years of War: What is a "Theory?"

Watch **this video** (a summary of 1,000 years of war).

This code will take you to the video.

While you're watching they have to be thinking about two things:

- *What patterns do you notice?*_____

  (Hint: focus on location and time)

- *Why might these patterns exist?*_____

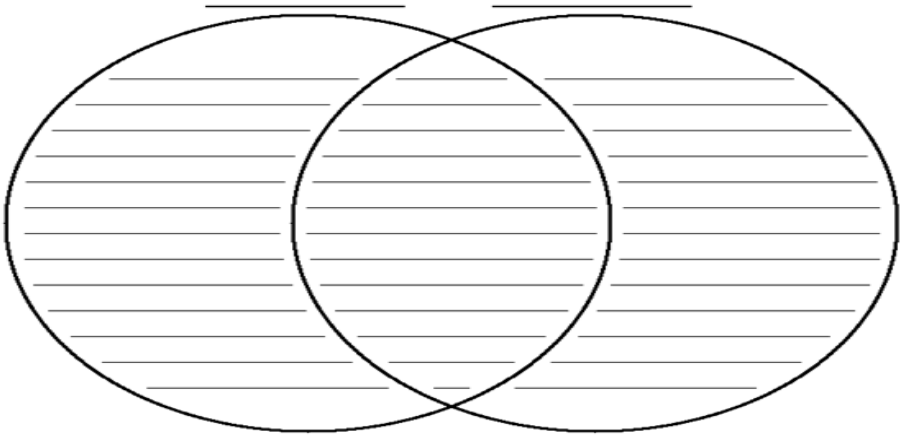
What is the purpose of a psychological theory: _____

Example: _____

GQ: What do psychological studies and theories have in common?

Extension
Compare and contrast psychological models and theories

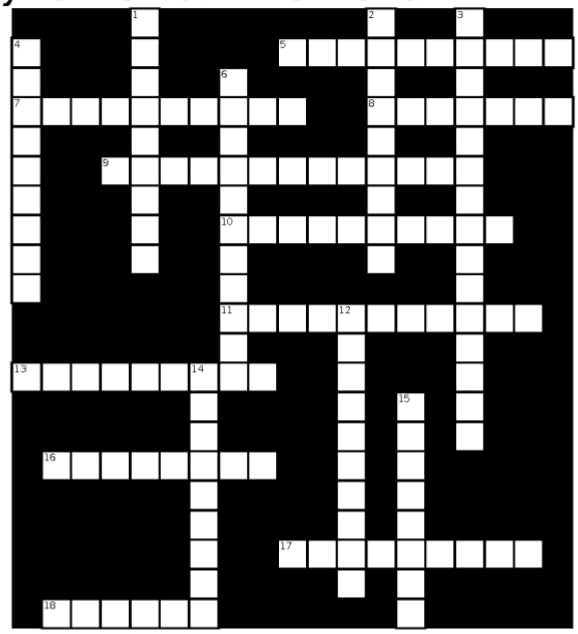
Name : _____ **Venn Diagram**



Notes

Introduction to Psychology

A review of key terms from this first unit.



Across

5 anything that has been observed to happen. In psychology it often refers to common behaviours and mental processes.
7 an unwanted variable that might affect the DV.
8 this group in an experiment receives some kind of procedure (or none whatsoever) that is NOT hypothesized to have an effect.
9 this type of ambiguity often arises in correlation studies when the direction of a relationship between variables is not clear.
10 this type of experiment is also known as a true experiment and seeks to control all extraneous variables.
11 this type of variable is the one the researcher changes and manipulates in order to create conditions.
13 this type of variable is what researchers measure. It is the "effect" in a cause-effect relationship.
16 this type of correlation exists when as one variable increases, so does the other.
17 internal thought-processes, such as thinking, memory and language.
18 this kind of relationship can only be concluded when all extraneous variables are controlled.

Down

1 any observable action, e.g. conformity, violence, altruism (in IB it means cognition, too).
2 this type of evidence is not trusted by psychologists because it is too vulnerable to biases.
3 an internal process, aka cognition.
4 this group in an experiment receives some kind of procedure that is hypothesized to have an effect.
6 when two variables are related to one-another (i.e. as one changes, so does the other).
12 the scientific study of individual human behaviour and mental processes.
14 this type of evidence is gathered from experimentation and direct observation.
15 this type of correlation exists when as one variable increases, the other decreases.