

# IB WORLD SCHOOL 1309 (ZSO13 Gdańsk)



# Psychology SL & HL syllabus & course of study

(based on Psychology guide, first exams 2019, 4 or 6h/week) Teacher – Agnieszka Jaśkiewicz-Janczyk

# Course description

At the core of the DP psychology course is an introduction to three different approaches to understanding behaviour: the biological, cognitive and sociocultural approaches. Students study and critically evaluate the knowledge, concepts, theories and research that have developed the understanding in these fields.

The interaction of these approaches to studying psychology forms the basis of a holistic and integrated approach to understanding mental processes and behaviour as a complex, dynamic phenomenon, allowing students to appreciate the diversity as well as the commonality between their own behaviour and that of others.

The contribution and the interaction of the three approaches is understood through the four options in the course, focusing on areas of applied psychology: abnormal psychology, developmental psychology, health psychology, and the psychology of relationships. The options provide an opportunity to take what is learned from the study of the approaches to psychology and apply it to specific lines of inquiry.

Psychologists employ a range of research methods, both qualitative and quantitative, to test their observations and hypotheses. DP psychology promotes an understanding of the various approaches to research and how they are used to critically reflect on the evidence as well as assist in the design, implementation, analysis and evaluation of the students' own investigations. Surrounding the approaches and the options are the overarching themes of research and ethics. A consideration of both is paramount to the nature of the subject.

### Course aims

The aims of the psychology course at SL and at HL are to:

1. develop an understanding of the biological, cognitive and sociocultural factors affecting mental processes and behaviour

- 2. apply an understanding of the biological, cognitive and sociocultural factors affecting mental processes and behaviour to at least one applied area of study
- 3. understand diverse methods of inquiry
- 4. understand the importance of ethical practice in psychological research in general and observe ethical practice in their own inquiries
- 5. ensure that ethical practices are upheld in all psychological inquiry and discussion
- 6. develop an awareness of how psychological research can be applied to address real-world problems and promote positive change.

# Course objectives

By the end of the psychology course at SL or at HL, students will be expected to demonstrate the following.

- 1. Knowledge and comprehension of specified content
  - Demonstrate knowledge and comprehension of key terms and concepts in psychology.
  - Demonstrate knowledge and comprehension of a range of psychological theories and research studies.
  - Demonstrate knowledge and comprehension of the biological, cognitive and sociocultural approaches to mental processes and behaviour.
  - Demonstrate knowledge and comprehension of research methods used in psychology.
- 2. Application and analysis
  - Demonstrate an ability to use examples of psychological research and psychological concepts to formulate an argument in response to a specific question.
  - Demonstrate application and analysis of a range of psychological theories and research studies.
  - Demonstrate application and analysis of the knowledge relevant to areas of applied psychology.
  - At HL only, analyse qualitative and quantitative research in psychology.
- 3. Synthesis and evaluation
  - Evaluate the contribution of psychological theories to understanding human psychology.
  - Evaluate the contribution of research to understanding human psychology.
  - Evaluate the contribution of the theories and research in areas of applied psychology.
  - At HL only, evaluate research scenarios from a methodological and ethical perspective.
- 4. Selection and use of skills appropriate to psychology
  - Demonstrate the acquisition of skills required for experimental design, data collection and presentation, data analysis and the evaluation of a simple experiment while demonstrating ethical practice.
  - Work in a group to design a method for a simple experimental investigation, organize the investigation and record the required data for a simple experiment.

• Write a report of a simple experiment.

# Course overview

# Biological approach to understanding behaviour

The biological approach to understanding behaviour is largely an investigation into correlations. Do areas of the brain correlate with behaviour? When changes take place in the brain do changes take place in behaviour or is the reverse the case? Could an individual's behaviour be predicted from their genes? Is human behaviour subject to natural selection?

The relationship between biology and behaviour is a complex one of mutual causality. The technology available to investigate this relationship is becoming ever more sophisticated, while the ethics of this line of inquiry are increasingly an area for public debate.

The biological approach to behaviour looks at:

- the brain and behaviour (SL and HL)
- hormones and behaviour (SL and HL)
- genetics and behaviour (SL and HL)
- the role of animal research in understanding human behavior (HL only).

# Relevant to all the topics are:

- the contribution of research methods used in the biological approach to understanding human behaviour
- ethical considerations in the investigation of the biological approach to understanding human behaviour.

# Cognitive approach to understanding behaviour

The cognitive approach to understanding behaviour looks at:

- cognitive processing (SL and HL)
- reliability of cognitive processes (SL and HL)
- emotion and cognition (SL and HL)
- cognitive processing in the digital world (HL only).

# Relevant to all the topics are:

- the contribution of research methods used in the cognitive approach to understanding human behaviour
- ethical considerations in the investigation of the cognitive approach to understanding human behaviour.

The cognitive approach to behaviour views human beings as processors of information much in the same way as a computer processes information. The cognitive approach to behaviour focuses on areas of research such as schema processing, memory processing, and thinking, and how cognition may influence behaviour. Researchers are also interested in the extent to which cognitive processes are reliable, for example, in relation to thinking and memory. How cognitive processes may be affected in the modern digitalized world is an emerging field within the cognitive approach to behaviour.

Cognitive processes are often influenced in complex ways by emotions. The influence of emotions on cognitive processes is studied not only by cognitive psychologists, but is developing as an area of interest for cognitive neuroscientists as well as social psychologists.

Research methods in the cognitive approach to understanding of behaviour rely on experiments and brain imaging technologies as well as qualitative approaches to understanding everyday memory and thinking, making the cognitive approach an example of the holistic approach to understanding human behaviour.

# Sociocultural approach to understanding behaviour

The sociocultural approach to behaviour looks at:

- the individual and the group (SL and HL)
- cultural origins of behaviour (SL and HL)
- cultural influences on individual attitudes, identity and behaviours (SL and HL)
- the influence of globalization on individual attitudes, identities and behaviour (HL only).

# Relevant to all the topics are:

- the contribution of research methods used in the sociocultural approach to understanding human behaviour
- ethical considerations in the investigation of the sociocultural approach to understanding human behaviour.

The sociocultural approach to behaviour investigates the role of social and cultural influences in shaping thinking and human behaviour. An increasing body of culturally informed research has made cross-cultural psychology as well as cultural psychology a contemporary topic of debate among psychologists working in the field. Theories, concepts and research studies provide the background for a more nuanced understanding of the variety and complexity of human behaviour. This is important in the modern globalized world where issues related to migration and integration are on the rise.

Key figures in the field of modern social psychology have often favoured experimental methods to understand how social context influences behaviours, identities, attitudes and cognitions, however, by studying acculturation in terms of intergroup relations, we can start to understand that the same processes may be seen in the interaction between cultural groups. Social and cultural psychologists are now also using qualitative research methods in order to get a better understanding of intergroup relations as well as the process of acculturation.

#### Approaches to researching behaviour

The study of psychology is evidence based and has evolved through a variety of different research approaches, both qualitative and quantitative. As students are exposed to research it is important that they understand the advantages and limitations of different approaches in order to critically evaluate the contribution of research studies to the understanding of human

behaviour. Asking questions, challenging assumptions and critically assessing the methods used by researchers are integral skills in the study of psychology. These skills are assessed in criteria D (critical thinking) of essay responses in paper 1 section B and paper 2, and they apply to both SL and HL students.

An understanding of approaches to research is also important for the internal assessment task in order to design, conduct, analyse, draw conclusions and evaluate an experiment. This applies to both SL and HL students.

Only HL students will be directly assessed on their understanding of approaches to research in paper 3.

#### Research methods

Essentially there are two approaches to research: qualitative and quantitative. There is no hierarchy to the approaches. The method chosen will depend on the aims and objectives of an investigation. No method is perfect in itself and all methods have their individual strengths and limitations. A researcher will choose the method or methods that are most suitable for a specific research study.

Approaches to research in psychology may be reductionist or holistic. As behaviour is often the result of complex social, cultural, cognitive as well as biological interactions, a combination of approaches to researching behaviour is not only inevitable, but desirable.

Abilities assessed: analysing data, evaluating research, drawing conclusions.

#### Options

There are four options covering areas of applied psychology:

- abnormal psychology
- developmental psychology
- health psychology
- psychology of human relationships.

SL students study one option, while HL students study two.

Whereas the core provides a general overview, the options allow students to study a specialized area of psychology to apply their learning. What is learned in the core forms the foundation for the learning in the options. The options provide the opportunity to integrate learning in an applied context. In addition, the options provide the opportunity to explore the different approaches taken in research and highlight the ethical considerations and sensitivities pertinent to a specific line of inquiry.

# Abnormal psychology

Abnormal psychology focuses on the diagnosis, explanation, and treatment of abnormal behaviour. The three topics for this option are:

- factors influencing diagnosis
- etiology of abnormal psychology
- treatment of disorders.

Each of these topics should draw on what has been learned in the biological, cognitive and sociocultural approaches to behaviour where appropriate. In addition, students should have the opportunity to explore the different approaches taken in research and should be made aware of the ethical considerations and the sensitivity required in a discussion of this subject. There is no clear definition of what constitutes normal behaviour and, by the same token, what constitutes abnormal behaviour. Concepts of normal and abnormal change over time and are influenced by such factors as

In discussing the topics students may look at several disorders or focus on a single disorder. Both are acceptable approaches to the content and have the same potential to score well in assessment. The disorders chosen to explain and develop the topics should come from the following categories:

- anxiety disorders
- depressive disorders
- obsessive compulsive disorder
- · trauma and stress related disorders
- eating disorders.

# Developmental psychology

Developmental psychology is the study of how and why people's behaviour and thinking changes over time. The three topics in this option are:

- influences on cognitive and social development
- · developing an identity
- developing as a learner.

Knowledge about the influence of biological, social and cultural factors in the development of an individual is helpful not only for families, but also in childcare and education to create opportunities for children and young people all over the world, so each of these topics should draw on what has been learned in the biological, cognitive and sociocultural approaches to behaviour where appropriate. In addition, students should have the opportunity to explore the different approaches taken in research and should be made aware of the ethical considerations and the sensitivity required in a discussion of this subject.

Developmental psychology focuses on how development can be supported or undermined. It is important to gain an understanding of the extent to which early experience may influence later development and if there are critical periods in development. Ideas centred around resilience are of relevance in this option and may help explain why some people are more affected by their experiences than others.

#### Health psychology

Many health issues are the result of lifestyle, either imposed on individuals or chosen by individuals, and often despite well-publicised risks. An understanding of health psychology is important in the development of prevention strategies and fosters a more positive perception of healthy choices. The three topics in this option are:

- determinants of health
- health problems
- promoting health.

Each of these topics should use the learning from the biological, cognitive and sociocultural approaches to behaviour where appropriate. In addition, students should have the opportunity to explore the different approaches taken in the research and should be made aware of the ethical considerations and the sensitivity required in a discussion of this subject.

It is important for health psychologists to take into account differences in attitudes towards health-related behaviour as well as variations in the incidence of health problems when trying to help individuals or consider ways to promote health. In addition, factors such as lifestyle and social context may influence health and illness, making one of the goals of health psychology to promote an understanding of behaviour that leads to a healthier lifestyle.

In discussing the issues students may look at several health-related phenomena or focus on a single health issue. Both are acceptable approaches to the content and have the same potential to score well in assessment. The topics being studied in this option should come from one or more of the following:

- stress
- addiction
- obesity
- chronic pain
- sexual health.

### Psychology of human relationships

Humans are social animals dependent on others for their well-being. This social psychology option focuses on human relationships between individuals in personal relationships or in groups. The three topics in this option are:

- personal relationships
- group dynamics
- social responsibility.

Each of these topics should use the learning from the biological, cognitive and sociocultural approaches to behaviour where appropriate. In addition, students should have the opportunity to explore the different approaches taken in the research and should be made aware of the ethical considerations and the sensitivity required in a discussion of this subject.

#### Internal assessment

Internal assessment is an integral part of the course and is compulsory for both SL and HL students. It enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests without the time limitations and other constraints that are associated with written examinations. The internal assessment should, as far as possible, be woven into normal classroom teaching and not be a separate activity conducted after the course has been taught.

The internal assessment requirements at SL and at HL are the same. Students will investigate a published study, theory or model relevant to their learning in psychology by conducting an experimental investigation and reporting the findings. The requirements will be explained in more detail in the internal assessment details.

Students are required to work as part of a group to plan and conduct the investigation. The research method, subjects and materials, as well as the operationalization of the Independent and Dependent Variables, will be the result of the group working together. Once the data has been generated the collaboration is complete. Each student will write up the report independently of other group members. The data will be analysed and conclusions drawn independently. Students should not discuss the results with other members of the group. Likewise, the evaluation should be carried out independently. While there will be some similarities (as the students are drawing on the same data), it is important that they are reminded of the requirements for academic honesty and the consequences of academic malpractice. The report must adhere to the ethical guidelines in all aspects.

The group must consist of a minimum of two students and a maximum of four students. SL and HL students may work together. Students may also choose to collaborate virtually with another student or students in other IB World Schools. Alternatively, students may work with another student who is not studying DP psychology. This may be a student studying a psychology course with another provider, or a student studying a related course such as an experimental science or social science course. Students may choose group members who share a common interest or they may join a group and then decide on an area for study within that group.

# Textbook/materials

InThinking site and material given during lessons

# Course of study:

# Psychology and TOK

TOK is invaluable for exploring some of the bigger questions relevant to the teaching, learning and practice of psychology. Questions that can be explored include the following.

- Can models and theories be used to understand and predict human behaviour?
- Does a researcher's choice of methodology affect the reliability or credibility of research?
- Is what we know about human behaviour limited by our ethical considerations?
- Are emotions universal?
- Are the methods of the natural sciences applicable in the social sciences?
- Are there human qualities or behaviours that will remain beyond the scope of science?

As with other areas of knowledge, there are a variety of ways of gaining knowledge in the social sciences, including observation and experimentation, inductive and deductive reasoning, and the collection of evidence.

Having followed a course of study in an individuals and societies subject, students should be able to reflect critically on the various ways of knowing and on the methods used in the social sciences, and in so doing become inquiring, knowledgeable and caring young people, as described in the IB learner profile.

# Psychology and CAS

CAS plays a crucial role in the DP in the development of personal and interpersonal skills. It also provides an important counterbalance to the academic pressures of the DP, allowing and valuing exploration and engagement beyond the academic.

Examples of CAS experiences with links to psychology include the following:

- acting as a mentor to children in lower years
- designing a welcome pack for students new to the school
- promoting a healthy lifestyle.

# Psychology and international-mindedness

International-mindedness is an umbrella term through which the IB defines the goal of international education, and which is exemplified by the emphasis in all IB programmes on promoting global engagement, multilingualism and intercultural understanding.

The DP psychology course develops an understanding of how our behaviour is shaped by the societies and cultures we experience and how we in turn shape our environment. The course also aids in the understanding of individual mental processes and behaviour with all its nuances and flaws and supports the understanding that others can also be right.

# Approaches to the teaching and learning of psychology

The layout of the psychology course as it appears in this guide is for information and does not represent a scheme of work. A holistic approach to the content of the course is encouraged and much of the content in one approach can be linked to the study of another. For example, cognitive processes and the methods used to understand the brain are closely related. This is also true of the options which build on the understandings from the approaches. In addition, the options have been framed to encourage the use of examples relevant to local as well as global contexts.

The internal assessment requires the development of social, communication and self-management skills through collaboration and teamwork, but a problem-based approach to the content would foster and develop these skills further. Underpinning all the approaches to teaching and learning in this course is a focus on the development of critical thinking. The three approaches to studying human mental processes and behaviour, as well as the recognition that psychology is evidence based, provide ample opportunity for the development of critical thinking skills.

For a more general overview of approaches to teaching and learning in the Diploma Programme, please see the Approaches to teaching and learning website.

A useful framework for developing and practising a critical approach to research in psychology is the summary below from Wade and Tavris. (Wade, C and Tavris, C. 1990. Psychology. 2nd edition. New York. Harper and Row.)

Ask questions, challenge assertions.

- Why are some studies still so influential in spite of their methodological or theoretical flaws?
- What was the historical context of the research?

# Define the problem.

• This helps the student to focus his or her argument and keep it on track.

# Examine the evidence for and against.

- Evaluate the research that gives support, fails to give support, or contradicts a theory.
- Avoid emotional reasoning and be aware of one's own biases.
- Reflexivity can be used to reduce a student's own bias.

# Do not oversimplify.

- Recognize reductionist arguments.
- Consider alternative explanations.
- Be aware of the findings of other studies or alternative theories.

#### Tolerate uncertainty.

• It is acceptable to say that research is inconclusive or contradictory.

# Employ cultural evaluation.

- Make comparisons with studies done in other cultures.
- Is there a cultural bias in the theory/study?

# Employ gender evaluation.

- Has gender been considered as a variable in the theory/study?
- Is there a gender bias in the theory/study?

# Employ methodological evaluation.

- What strengths and limitations are inherent in the methodology/method/technique used?
- Are there aspects of the method used that compromise its validity (for example, representativeness of the sample)?
- What would happen if the study were repeated today with different subjects?
- Consider the use of triangulation to evaluate findings.

# Employ ethical evaluation.

- Would the study be acceptable to modern ethical committees?
- Is there any justification for the infringement of ethical standards?

# Evaluate by comparison.

- How effective is the theory in explaining the behaviour compared with another theory?
- How do the findings of study X compare with those of study Y, and what could account for any differences?

#### Curriculum model overview

	Teaching hours	
Syllabus component	SL	HL
<ul> <li>Core</li> <li>Biological approach to understanding behaviour</li> <li>Cognitive approach to understanding behaviour</li> </ul>	90	120
<ul> <li>Sociocultural approach to understanding behaviour</li> <li>Approaches to researching behaviour</li> </ul>	20	60
Options	20	40
Internal assessment Experimental study	20	20
Total teaching hours	150	240

# Assessment: outline and criteria for each component

By the end of the psychology course at SL or at HL, students will be expected to demonstrate the following.

- 1. Knowledge and comprehension of specified content
  - Demonstrate knowledge and comprehension of key terms and concepts in psychology
  - Demonstrate knowledge and comprehension a range of psychological theories and studies
  - Demonstrate knowledge and comprehension the biological, cognitive and sociocultural approaches to mental processes and behaviour
  - Demonstrate knowledge and comprehension research methods used in psychology.
- 2. Application and analysis

- Demonstrate an ability to use examples of psychological research and psychological concepts to formulate an argument in response to a specific question.
- Demonstrate application and analysis of a range of psychological theories and research studies
- Demonstrate application and analysis the knowledge relevant to areas of applied psychology.
- At HL only, analyse qualitative and quantitative research in psychology.
- 3. Synthesis and evaluation
  - Evaluate the contribution of psychological theories to understanding human psychology
  - Evaluate the contribution of research to understanding human psychology
  - Evaluate the contribution of the theories and research in areas of applied psychology.
  - At HL only, evaluate research scenarios from a methodological and ethical perspective.
- 4. Selection and use of skills appropriate to psychology
  - Demonstrate the acquisition of skills required for experimental design, data collection and presentation, data analysis and the evaluation of a simple experiment while demonstrating ethical practice.
  - Work in a group to design a method for a simple experimental investigation, organize the investigation and record the required data for a simple experiment.
  - Write a report of a simple experiment.

# Assessment at a glance

		Time (hours)		of f	hting inal e (%)
Type of assessment	Format of assessment	SL	HL	SL	HL
External		3	5	75	80
Paper 1	Three short answer questions on the core. One essay from a choice of three on the biological, cognitive and sociocultural approaches. <b>HL only:</b> essays will reference additional HL topic.	2	2	50	40
Paper 2	SL: one question from a choice of three on one option. HL: two questions; one each from a choice of three on two options.	1	2	25	20
Paper 3	Three short answer questions on approaches to research.		1		20
Internal		20	20	25	20
Experimental study	A report on an experimental study undertaken by the student.	20	20	25	20

#### Assessment criteria

For Paper 1 and Paper 2 - criteria are the same for SL and HL

# Paper 1

#### Section A

Paper 1 section A consists of three short-answer questions using AO1 and AO2 command terms. All three questions are compulsory. Each question is marked out of 9 marks using the rubric below, for a total of 27 marks

Markband	Level descriptor	
0	The answer does not reach a standard described by the descriptors below.	
	The response is of limited relevance to or only rephrases the question.	
1–3	Knowledge and understanding is mostly inaccurate or not relevant to the question.	
	The research supporting the response is mostly not relevant to the question and if relevant only listed. $ \\$	
4–6	The response is relevant to the question, but does not meet the command term requirements.	
	Knowledge and understanding is accurate but limited.	
	The response is supported by appropriate research which is described.	
7–9	The response is fully focused on the question and meets the command term requirements.	
	Knowledge and understanding is accurate and addresses the main topics/problems identified in the question.	
	The response is supported by appropriate research which is described and explicitly linked to the question.	

#### Section B

Paper 1 section B consists of a single essay from a choice of three. The essay is marked out of 22 marks. AO3 command terms will be used in the essay questions. The essays will be assessed using the rubric below

Essay marking rubric (total 22 marks)

#### Criterion A: Focus on the question (2 marks)

To understand the requirements of the question students must identify the problem or issue being raised by the question. Students may simply identify the problem by restating the question or breaking down the question. Students who go beyond this by **explaining** the problem are showing that they understand the issues or problems.

Mark	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	Identifies the problem/issue raised in the question.
2	Explains the problem/issue raised in the question.

#### Criterion B: Knowledge and understanding (6 marks)

This criterion rewards students for demonstrating their knowledge and understanding of specific areas of psychology. It is important to credit **relevant** knowledge and understanding that is **targeted** at addressing the question and explained in sufficient detail.

Mark	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The response demonstrates limited relevant knowledge and understanding.
	Psychological terminology is used but with errors that hamper understanding.
3–4	The response demonstrates relevant knowledge and understanding but lacks detail.
	Psychological terminology is used but with errors that do not hamper understanding.
5–6	The response demonstrates relevant, detailed knowledge and understanding.
	Psychological terminology is used appropriately.

#### Criterion C: Use of research to support answer (6 marks)

Psychology is evidence based so it is expected that students will use their knowledge of research to support their argument. There is no prescription as to which or how many pieces of research are appropriate for their response. As such it becomes important that the research selected is **relevant** and useful in **supporting** the response. One piece of research that makes the points relevant to the answer is better than several pieces that repeat the same point over and over.

Mark	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	Limited relevant psychological research is used in the response.
	Research selected serves to repeat points already made.
3–4	Relevant psychological research is used in support of the response and is partly explained.
	Research selected partially develops the argument.
5–6	Relevant psychological research is used in support of the response and is thoroughly explained.
	Research selected is effectively used to develop the argument.

# Criterion D: Critical thinking (6 marks)

This criterion credits students who demonstrate an inquiring and reflective attitude to their understanding of psychology. There are a number of areas where students may demonstrate critical thinking on the knowledge and understanding used in their responses and the research used to support that knowledge and understanding. The areas of critical thinking are:

- research design and methodologies
- triangulation
- assumptions and biases
- contradictory evidence or alternative theories or explanations

areas of uncertainty.

These areas are not hierarchical and not all areas will be relevant in a response. In addition, students could demonstrate a very limited critique of methodologies, for example, and a well-developed evaluation of areas of uncertainty in the same response. As a result a holistic judgment of their achievement in this criterion should be made when awarding marks.

Mark	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	There is limited critical thinking and the response is mainly descriptive.
	Evaluation or discussion, if present, is superficial.
3–4	The response contains critical thinking, but lacks development.
	Evaluation or discussion of most relevant areas is attempted but is not developed.
5–6	The response consistently demonstrates well-developed critical thinking.
	Evaluation or discussion of relevant areas is consistently well developed.

#### Criterion E: Clarity and organization (2 marks)

This criterion credits students for presenting their response in a clear and organized manner. A good response would require no re-reading to understand the points made or the train of thought underpinning the argument.

Mark	Level descriptor
0	Does not reach the standard described by the descriptors below.
1	The answer demonstrates some organization and clarity, but this is not sustained throughout the response.
2	The answer demonstrates organization and clarity throughout the response.

# Paper 2

Paper 2 consists of one essay question for the option studied. Each option will have a choice of three essays. All essays will use an AO3 command term. The essay is marked out of 22 marks. The essay will be assessed using the rubric shown below.

Criteria for Paper to are the same as in Paper 1-section B (both for SL and HL)

# HL only - Paper 3

# Paper 3

Paper 3 assesses the approaches to research in psychology. The paper consists of a research scenario followed by a three short answer questions for a total of 24 marks.

#### Question 1

Question 1 will consist of **all** of the following questions, for a total of 9 marks. The questions will be assessed using an analytical markscheme.

Questions	Marks
Identify the method used and outline two characteristics of the method.	3
Describe the sampling method used in the study.	3
Suggest an alternative or additional method giving one reason for your choice.	3

#### Question 2

Question 2 will consist of **one** of the following questions, for a total of 6 marks. The question will be assessed using an analytical markscheme.

Questions	Marks
<b>Describe</b> the ethical considerations that were applied in the study and <b>explain</b> if further ethical considerations could be applied.	6
<b>Describe</b> the ethical considerations in reporting the results and <b>explain</b> ethical considerations that could be taken into account when applying the findings of the study.	6

#### Question 3

Question 3 will consist of **one** of the following questions, for a total of 9 marks. The question will be assessed using the rubric below.

Questions	Marks
Discuss the possibility of generalizing the findings of the study.	9
<b>Discuss</b> how a researcher could ensure that the results of the study are credible.	9
Discuss how the researcher in the study could avoid bias.	9

# Rubric for question 3

Markband	Level descriptor
0	The answer does not reach a standard described by the descriptors below.
1–3	The question is misunderstood and the central issue is not identified correctly, resulting in a mostly irrelevant argument.
	The response contains mostly inaccurate references to the approaches to research or these are irrelevant to the question.
	The reference to the stimulus material relies heavily on direct quotations from the text.
4–6	The question is understood, but only partially answered resulting in an argument of limited scope.
	The response contains mostly accurate references to approaches to research which are linked explicitly to the question.
	The response makes appropriate but limited use of the stimulus material.
7–9	The question is understood and answered in a focused and effective manner with an accurate argument that addresses the requirements of the question.
	The response contains accurate references to approaches to research with regard to the question, describing their strengths and limitations.
	The response makes effective use of the stimulus material.

# Internal assessment criteria SL and HL

The assessment of the internal assessment task is the same for both SL and HL students and uses the following rubric.

# I. Introduction (6 marks)

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The aim of the investigation is stated but its relevance is not identified.
	The theory or model upon which the student's investigation is based is identified but the description is incomplete or contains errors.
	Null and/or research hypotheses are stated, but do not correctly identify the Independent or Dependent Variables.
3–4	The aim of the investigation is stated and its relevance is identified but not explained.
	The theory or model upon which the student's investigation is based is described but the link to the student's investigation is not explained.
	The Independent and Dependent Variables are correctly stated in the null or research hypotheses, but not operationalized.
5–6	The aim of the investigation is stated and its relevance is explained.
	The theory or model upon which the student's investigation is based is described and the link to the student's investigation is explained.
	The Independent and Dependent Variables are stated and operationalized in the null or research hypotheses.

# II. Exploration (4 marks)

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The research design is described.  The sampling technique is described.
	Characteristics of the participants are described.  Controlled variables are described.  The materials used are described.
3-4	The research design is explained. The sampling technique is explained. The choice of participants is explained. Controlled variables are explained. The choice of materials is explained.

# III. Analysis (6 marks)

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	Only descriptive or inferential statistics are applied.  A correct graphing technique is chosen but the graph does not address the hypothesis.  There is no clear statement of findings.
3-4	Appropriate descriptive and inferential statistics are applied but there are errors.  The graph addresses the hypothesis but contains errors.  The statistical findings are stated but either not interpreted with regard to the data or not linked to the hypothesis
5-6	Descriptive and inferential statistics are appropriately and accurately applied.  The graph is correctly presented and addresses the hypothesis.  The statistical findings are interpreted with regard to the data and linked to the hypothesis
Marks	Comments

# IV. Evaluation (6 marks)

Marks	Level descriptor
0	Does not reach the standard described by the descriptors below.
1–2	The findings of the investigation are described without reference to the background theory or model.
	Strengths and limitations of the design, sample or procedure are stated but are not directly relevant to the hypothesis.
	One or more modifications are stated.
3–4	The findings of the student's investigation are described with reference to the background theory or model.
	Strengths and limitations of the design, sample or procedure are stated and described and relevant to the investigation.
	Modifications are described but not explicitly linked to the limitations of the student's investigation.
5–6	The findings of the student's investigation are discussed with reference to the background theory or model.
	Strengths and limitations of the design, sample and procedure are stated and explained and relevant to the investigation.
	Modifications are explicitly linked to the limitations of the student's investigation and fully justified.