

IB DP IB1 Psychology (Group 3) HL (IB1)



## **Summary**

## 2.3 Genetics and Behaviour

Subject Start date Duration Year

IB1 Psychology Week 3, April 3 weeks 12 hours

Course Part

Biological Approach: The relationship between genetics and behaviour

Description

Genes and their effects on behaviour: Study one gene and its link to behaviour.

Genes are made of DNA providing the blueprint for the structure and function of the human body, including behaviour.

Genetic similarity: Study genetic similarity (twins, siblings, parents, adopted children) for one behaviour.

Genetic similarity is referred to as relatedness. The greater the genetic similarities between two individuals or a group of individuals the higher the degree of relatedness.

Study the following.

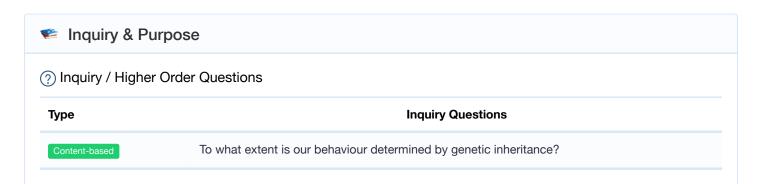
· Twin and kinship studies

Evolutionary explanation for behaviour: Study one example of an evolutionary explanation for behaviour.

Examples include survival of the fittest and natural selection.

Genes are constantly being switched on and off by signals from inside and outside the body. Internal signals include the presence of hormones or other chemicals, or indeed other genes. Hormones are frequently produced as a result of environmental events and work by altering gene expression. There are countless environmental events that also affect gene expression. The signal activates special proteins that can promote or block the expression of a gene.

Sometimes genes are permanently switched off through methylation of the DNA molecule as part of the developmental process. This effect on genes is sometimes referred to as epigenetics as there is no alteration in the actual structure of the DNA. Mutations occur when there is an actual alteration of the DNA.



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## Curriculum



Develop an understanding of the biological, cognitive and sociocultural factors affecting mental processes and behaviour

Objectives

## Synthesis and evaluation

evaluate the contribution of psychological theories to understanding human psychology

Syllabus Content

#### Core

Biological approach to understanding behaviour

Genetics and behaviour

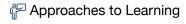
Genes and behaviour: The evidence for links between genes and certain types of behaviour requires critical evaluation in the light of environmental factors.

Genetic similarities: Genetic similarity is referred to as relatedness. The greater the genetic similarities between two individuals or a group of individuals the higher the degree of relatedness. An awareness of the degree of relatedness between MZ and DZ twins, siblings, parents and children, and parents and adopted children provides a critical perspective in evaluating twin or kinship studies.

Evolutionary explanations for behaviour: If genes code for behaviour as well as physical traits, then behaviour is subject to evolutionary pressures in the same way that physical traits are subject to evolutionary pressures.



## ATL Skills





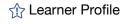
### **Thinking**

- In this unit, we will

ask students to formulate a reasoned argument to support their opinion or conclusion



# **Developing IB Learners**





**Thinkers**