

## Summary

### 2.3 Genetics and Behaviour

Subject	Year	Start date	Duration
Psychology	IB1	Week 3, April	<b>3 weeks</b> 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.

## Inquiry & Purpose

### Inquiry / Higher Order Questions

Type	Inquiry Questions
<b>Content-based</b>	To what extent is our behaviour determined by genetic inheritance?

## Curriculum

### Aims

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

### Approaches to Learning

#### Thinking

- In this unit, we will

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

## Developing IB Learners

### Learner Profile



Thinkers