KNOWLEDGE ORGANISER LO2/3: EXPLAIN AND EVALUATE BIOLOGICAL EXPLANATIONS OF CRIME

AC2.1 DESCRIBE BIOLOGICAL THEORIES OF CRIMINALITY
AC3.2 EVALUATE THE EFFECTIVENESS OF THEORIES

Learners should have knowledge of a range of genetic theories, such as:
- Jacobs XYY study
- twin and adoption studies

Learners should have knowledge of a range of physiological theories, e.g.
- Lombroso
- Sheldon

Learners should evaluate the strengths and weaknesses of criminological theories in terms of explaining crime.

Interleaving and Synoptic links: You should also be able to link the biological explanations to the different types of crimes examined in Unit 1 (AC1.1). You will also be able to apply the various theories to analyse different situations of criminality (AC3.1 in Unit 2):

Exam Hint: When you evaluate, go straight into the strengths or limitations. DO NOT explain the theory otherwise you will waste precious examination time

AC2.1 CONTENT OVERVIEW

Biological theories focus on the idea that physical characteristics make some people more likely to commit crime than others. Such criminal tendencies can be genetic and therefore inherited (a person is born bad). Other explanations can be classes as physiological meaning that a person's physical form can be an indicator of criminality. Brain abnormalities such as damage to the pre-frontal cortex of the brain can cause altered behaviour leading to loss of self-control and behaviour modification.

XYY: This is a rare condition called, which involves some men having an extra Y chromosome. Jacob (1965) suggested that men with this condition are 'more aggressive and prone to violence' than normal XY men e.g. there are a disproportionate number of sufferers in the prison population compared to the general population.

Twin Studies: Twin studies support the contention that a heritable trait may increase risk for criminal behaviour. When both of the twins share a characteristic there is said to be a concordance rate. One of the earlier and simpler twin studies was conducted in the 1920s by Johannes Lange (1929). The correlation between the genetic closeness of the biological relationship and crime was especially true for serious violent crime and for more lengthy criminal careers.

Adoption Studies: Adoption studies explain criminality by comparing criminals with both their biological and adoptive parents. So if in terms of criminal behaviour, a child is more similar to its biological parents, a genetic basis of criminality may be suggested. Mednick (1975) studied 4,000 adopted children and found that a high number of boys with criminal convictions had biological parents with criminal convictions too, but found no link between criminal convictions of adoptive parents.

Lombroso: Cesare Lombroso argues that the 'criminal' is a separate species (between primitive and modern humans). He claimed that you could determine a 'criminal' by the physical shape of a person. He referred to these as atavistic, or ancient, features. Lombroso referred to this species as *homo delinquens*. Some of these atavistic features include a narrow sloping brow, a prominent jaw, high cheekbones, large ears as well as having extra nipples, toes or fingers.

Sheldon: William Sheldon developed Lombroso's principle that criminality was linked to the physical form of an individual. He studied a range of over 4000 photographs of men. He argued that there were 3 fundamental body types or somatotypes. They are endomorphic (fat and soft), ectomorphic (thin and fragile) and mesomorphic (muscular and hard). Using a correlational study (comparing college students and delinquents) he found that those identified as ectomorph were the least likely to be aggressive and commit violence. Many of the criminals used in the study were found to be mesomorphic, and therefore be more prone to the use of aggression and violence.

AC3.2 CONTENT OVERVIEW

XYY THEORY

- One study by Jacob (1965) found that a significant number of men in prison had XYY sex chromosomes instead of the normal XY
- Alder (2007) indicated that it is possible that aggressive and violent behaviour is at least partly determined by genetic factors

- Theilgaard (1984) researched the traits of XYY men compared to XY men and found that the characteristic of aggression was not associated with XYY men
- Focussing too heavily on genetics ignores the influence of the environment and the behaviourist approach

TWIN & ADOPTION STUDIES

- As adopted children are exposed to a different environment to their biological family, it is easier to separate genetic and environmental factors
- Christiansen (1977) supports the view that criminality does have a genetic component

- The age of adoption may mean the adopted children have already been influenced by either their natural parents or their foster environment
- Early twin studies, such as Lange (1929) were inadequately controlled and lacked validity

LOMBROSO

- Lombroso was the first person to give criminology scientific credibility
- Other research does suggest that less attractive individuals are more likely to be considered guilty
- Goring (1913) did find a low-order intelligence in convicts

- Not everyone with atavistic features is a criminal
- DeLisi (2012) indicated that many of the atavistic features are specific to people of African descent – scientific racism
- Extremely deterministic and assumes we cannot escape destiny

SHELDON AND SOMATOTYPES

- There is an association between bodily build and criminality
- A good sized sample was used
- Glueck & Glueck (1956) found in their research that in a sample of delinquents, 60% were mesomorphs, while in non-delinquent sample there were only 31%

- If a court sees that the accused is of a certain body shape they may be more likely to label them as guilty
- Does not take into account that people's somatype is not fixed.
- Fails to explain criminal behaviour committed by other bodily types

SUBJECT LITERACY

	CONCEPT(S)			
1	Biological theories			
2	Genetic theories			
3	Physiological theories			
4	XYY			
5	Twin & Adoption Studies			
6	Atavistic features			
7	*Homo delinquens*			
8	Somatotypes			
9	Endomorphic			
10	Ectomorphic			
11	Mesomorphic			
12	Correlation			
13	Concordance rates			
14	Brain abnormalities			
15	Crime			
16	Deviance			
17	Aggression			
18	Delinquents			
19	Validity			
20	Scientific racism			
21	Deterministic			

EXAM LIERACY

Identify	If you are asked to identify then you simply just recognise and establish or state what something is.
Define	To define then you need to state what the meaning of a key word or concept is.
Describe	To describe is to paint a picture with words; to give information and detail about a concept.
Explain	To explain something, you need to give reasons to back up any statements that you made.
Analyse	To analyse means to examine in detail and break the question down into different component parts and examine relationships between concepts
Compare	Explain the similarities and differences between two different concepts or arguments.
Evaluate	This means to make a judgement. You would often include the strengths and weaknesses of a subject and form a judgement.

SAMPLE EXAM QUESTIONS

Describe how research suggests a connection between crime and brain damage.
[5 marks]

Explain a physiological explanation of criminality.
[4 marks]

Describe a biological theory of crime.
[4 marks]

Describe a genetic theory of criminality.
[5 marks]

Describe the weaknesses of a physiological theory of criminality
[5 marks]

Evaluate the effectiveness of a range of biological theories to explain causes of criminality
[8 marks]