**CB4 Revision Mat:**

**Classification:**

Complete the table identifying the kingdoms and their main characteristics.

|  |  |
| --- | --- |
| Kingdom | Characteristics  |
|  |  |
|  |  |
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What can be said about the DNA analysis of closely related organisms?

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Explain how genetic analysis led to Archaea being placed in their own domain.

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**Darwin’s theory cont.**



Explain how bacteria become resistance to antibiotics, supporting Darwin’s theory.

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**Darwin’s theory:**

What is natural selection?

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How does natural selection lead to evolution?

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**Evidence of human evolution:**

What is evolution?

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Place the fossils in order of discover (oldest to youngest)

*Homo sapiens, Homo habilis, Ardipithecus ramidus, Australopithecus afarensis and Homo erectus*

Oldest: ………………………………………………………..

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……………………………………………………………………….

Youngest: …………………………………………………….

How do stone tools provide evidence for human evolution?

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**Genetic engineering of bacteria (Higher)**



Explain how genetic engineering of bacteria is carried out.

*Include following keywords: restriction enzymes, sticky ends, ligase, vector*

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**Genes in agriculture and medicine**

What are the benefits of selective breeding?

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What are the risks of selective breeding?

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Explain the advantages and disadvantages of **GM herbicide resistant plants:**

Advantages

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Disadvantages

…………………………………………………………………………………………………………………………………………………………………………………………

……………………………………………………………………………………………

Explain the advantages and disadvantages of **GM insulin**

Advantages

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Disadvantages

…………………………………………………………………………………………………………………………………………………………………………………………

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**Breeds and varieties**

What is selective breeding?

…………………………………………………………………………………………………………………………………………………………………………………………

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State characteristics that plants and animals are bred for:

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What is genetic engineering?

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Explain the advantages and disadvantages of GM rice ‘ golden rice’

Advantages:

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

Disadvantages:

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