

Autumn 2

Year 11 B14 Variation and evolution

Aiming for Grade 8 (Triple)

Extended Homework Assignment

Name: _____

Set: _____

Instructions

A printed copy should be handed into your teacher.

The knowledge required to complete this assignment will be supported in class in lessons of the half term.



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TRIPLE - B14 Variation and evolution – Aiming for Grade 8

Aims

The aim of this homework is to help you revise the main topics in Chapter 14, Variation and evolution.

Learning outcomes

After completing this activity, you should be able to:

- state some examples of genetic and environmental variation
- compare the mechanisms involved in natural selection and selective breeding
- explain the mechanisms involved in genetic engineering
- describe the different types of cloning.

Task

You will be creating a visual summary on separate paper on the content from chapter B14, *Variation and evolution*.

Your visual summary will cover **two of the three** following topics: natural selection and selective breeding, genetic engineering, and cloning.

Questions:

1 Natural selection and selective breeding

Add the headings “Natural selection” and “Selective breeding” to your visual summary.

Describe how natural selection and selective breeding work. You can use examples.

Add a section to your visual summary comparing the similarities and differences between natural selection and selective breeding.

2 Genetic engineering

Add a heading of “Genetic engineering” to your visual summary

Describe how genetic engineering works. You can use a flowchart to describe the process. Add diagrams to your flowchart.

3 Cloning

Add the heading “Cloning” to your visual summary. Add three further headings: “plant cloning”, “animal cloning”, and “adult cell cloning”.

Describe what a clone is and the different ways that clones are created. You can use diagrams and flowcharts to describe plant cloning, animal cloning, and adult cell cloning.