Autumn Term

Year 11 B13 Reproduction

Aiming for Grade 6

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.

B13 Reproduction – Aiming for Grade 6

Aims

The aim of this homework is to help you revise the main topics in Chapter 13, Reproduction.

Learning outcomes

After completing this activity, you should be able to:

- state the advantages and disadvantages of asexual and sexual reproduction
- describe what occurs during the process of meiosis
- describe the structure of DNA
- describe protein synthesis
- complete a genetic cross diagram.

Task

Using knowledge you have gained in lessons and your own research, complete the tasks below.

Questions:

Part 1 – Asexual and sexual reproduction

1 Write the headings ‘asexual reproduction’ and ‘sexual reproduction’ on a sheet of paper.

2 Under each heading, write down all the advantages and disadvantages of that type of reproduction. You can use your student book to help you.

Part 2 – Meiosis

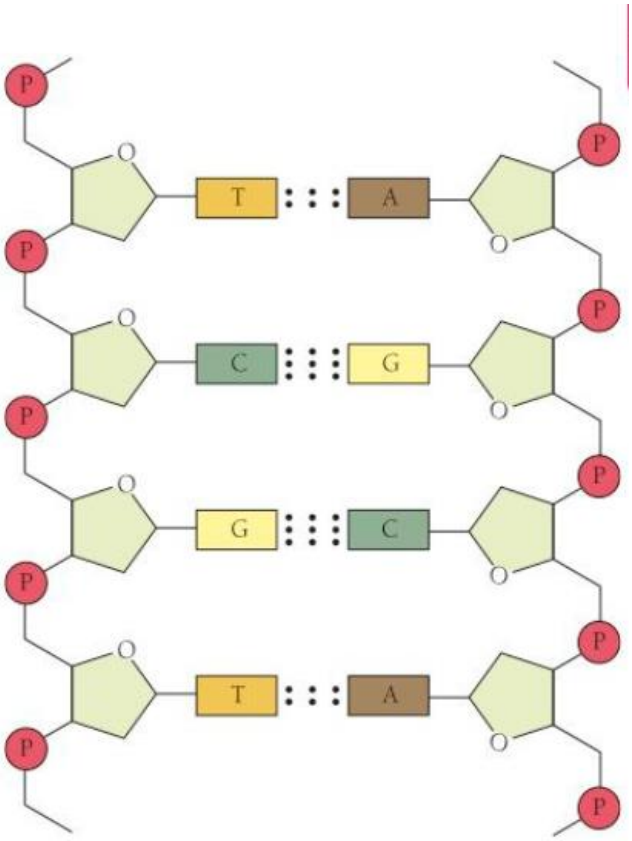
3 Create a flowchart describing what occurs during meiosis.

Remember to include:

- The number of sets of chromosomes
- If genetic material is duplicated or halved
- How many divisions there are
- If the cell is a gamete.

Part 3 – The structure of DNA

Using your own knowledge and research, label the structure of DNA. You can cut this diagram out to stick onto separate paper, or draw a copy of it.



4 Part 4 – Protein synthesis (Triple scientists only)

Using your knowledge and research to help, draw a flowchart to describe protein synthesis.

Include the following words: genes, DNA, nucleus, ribosome, carrier molecules, amino acid

Part 5 – Inheritance

5 B – is the allele for Brown eyes b – is the allele for blue eyes.

A mother had the genotype bb and the father the genotype Bb. Draw a genetic diagram to show the ratio of expected offspring. Use the Punnett square template to help you.

	Mother bb	
Father Bb		

Ratio: …… child with brown eyes to …… child with blue eyes

Extension

Using the alleles above is it possible for two brown eyed parents to have a blue eyed child? Explain your answer and show your workings.