Why do you cool the mixture in ice?

To stop the DNA from breaking down.

Why are enzymes added?

To break down the proteins found in chromosomes.

Why is cold ethanol added?

To precipitate the DNA / DNA IS INSOLUBLE IN ETHANOL.

3.7B Explain how the order of bases in a section of DNA decides the order of amino acids in the protein and that these fold to produce specifically shaped proteins such as enzymes

Order of bases determines the order of amino acids. So determines the order of the polypeptide chain. Folding is determined. Protein is determined and also the structure and function.

1) mRNA leaves the nucleus through the nuclear pore.

2) mRNA attaches to a ribosome in the cytoplasm

3) mRNA is translated 3 bases at a time called a **codon**.

4) A tRNA comes along with an anticodon that is complementary to the first codon on the mRNA.

5) tRNA also carries an amino acid.

6) This continues until a stop codon is reached.

7) A bond called a peptide bond joins the amino acids together.

8) A long chain of amino acids is formed which is called a polypeptide. This folds to form a protein.

How is a mRNA structurally different from DNA?

RNA is single stranded while DNA is double stranded.

RNA has a sugar called ribose while DNA has a sugar called deoxyribose.

3.19 State that most phenotypic features are the result of multiple genes rather than single gene inheritance

Phenotype = results from multiple genes as inherited from both parents rather than one parent. = not single gene inheritance.

3.20 Describe the causes of variation that influence phenotype, including:

a genetic variation – different characteristics as a result of mutation and sexual reproduction

b environmental variation – different characteristics caused by an organism's environment (acquired characteristics)

Variation = genetic and environmental - sexual reproduction and mutation + environment.