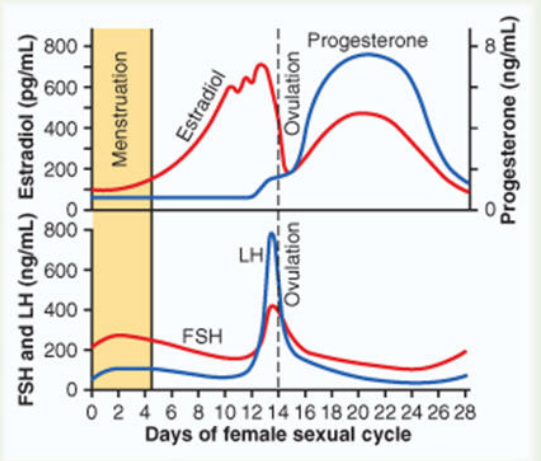
Name_____

Reproductive System

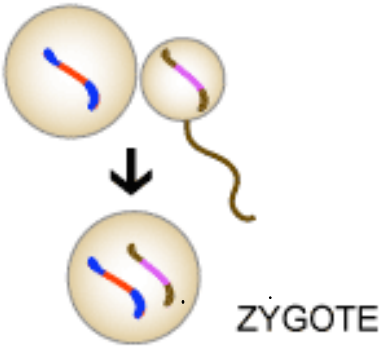
Reproductive System Matching

____ Uterus	a. Location of egg development
____ Testosterone	b. The unity of egg and sperm resulting in a complete set of DNA
____ Estrogen	c. Transports genetic material
____ Fallopian Tubes	d. Hormone that regulates cycle in human males produced in the testes
____ Ovaries	e. Its effects can alter genetic information in sperm/eggs
____ Testes	f. Site of embryonic/fetal development
____ Fertilization	g. Permits the passage of nutrients and oxygen between mother and baby
____ Sperm	h. Hormone produced in the ovaries that regulates cycles in females
____ Radiation	i. Site of sperm production
____ Placenta	j. Site of fertilization

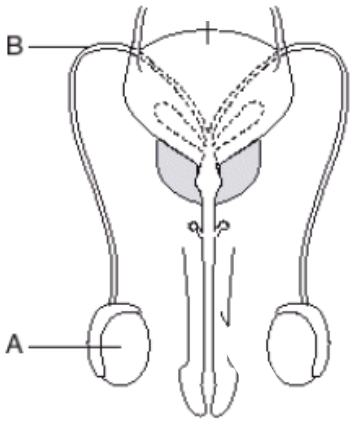
Explain what is going on in this chart



Describe what is going on in this picture.



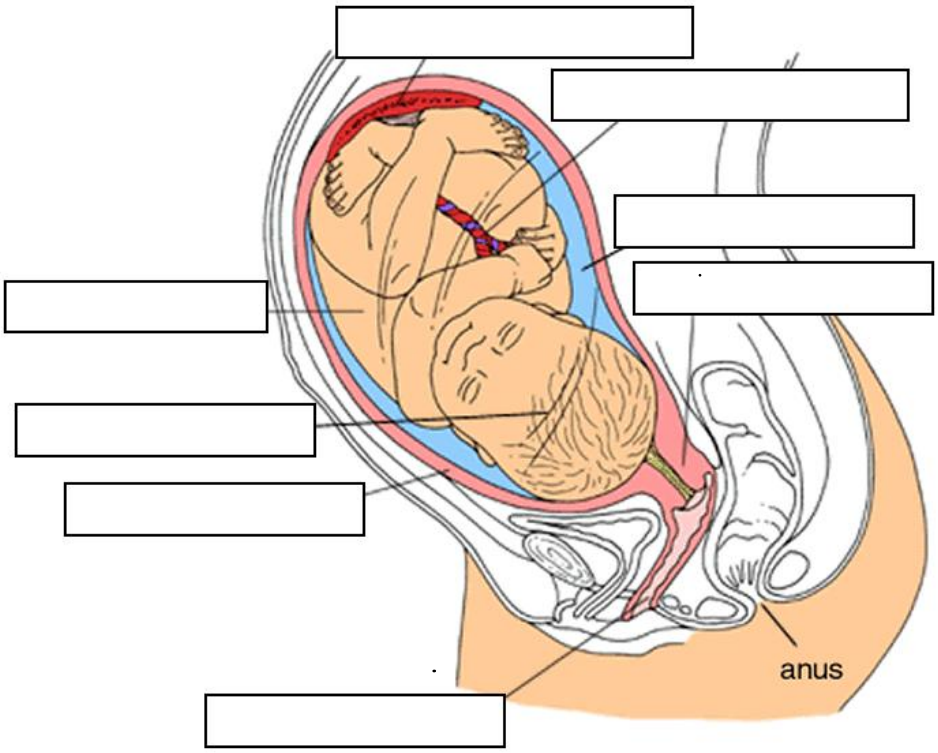
Label A and B in the diagram below.

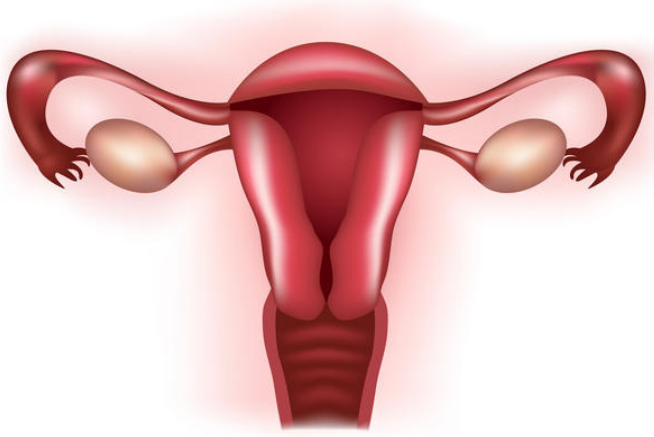


What happens if B is blocked or cut?

What is that called?

Label the fallopian tubes, ovaries, uterus, placenta, birth canal (vagina), and umbilical cord





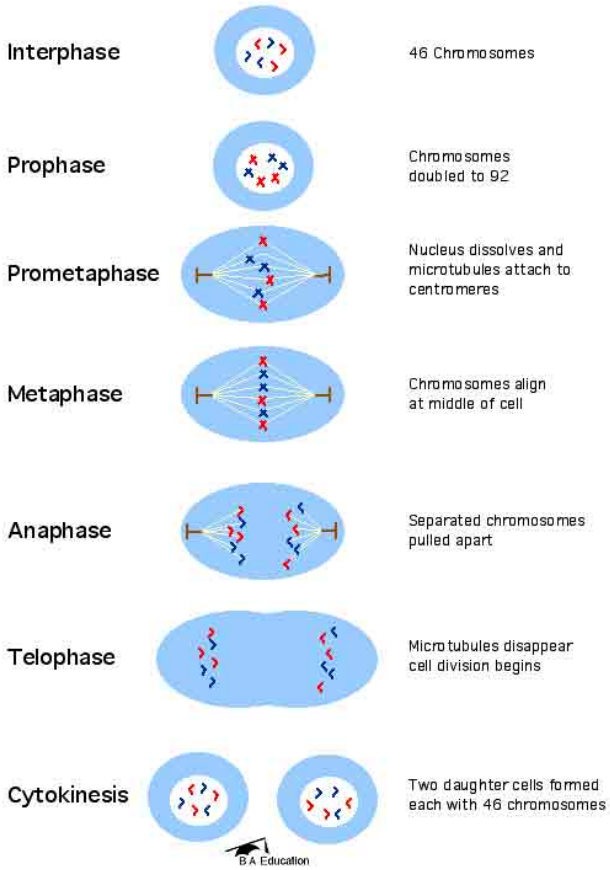
Mitosis and Meiosis

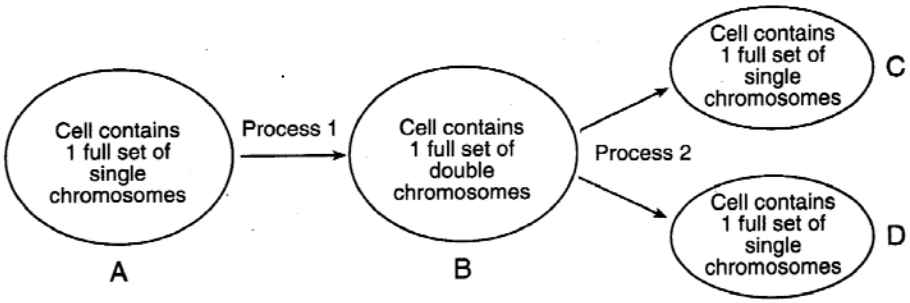
What is this process called?

What can be said about the chromosome number of each daughter cell as compared to the parent cell?

Why is anaphase so important in this process?

How would the chromosome number of the daughter cells compare to the parent cell if this was meiosis?

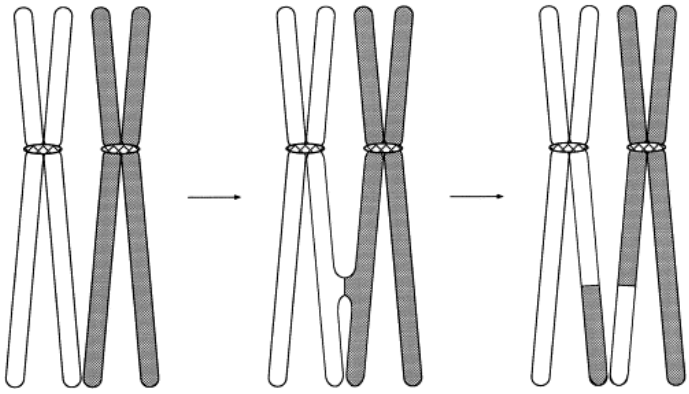




What is going on in this diagram?

What is the result of this procedure?

Why is it important in the survival of a species?

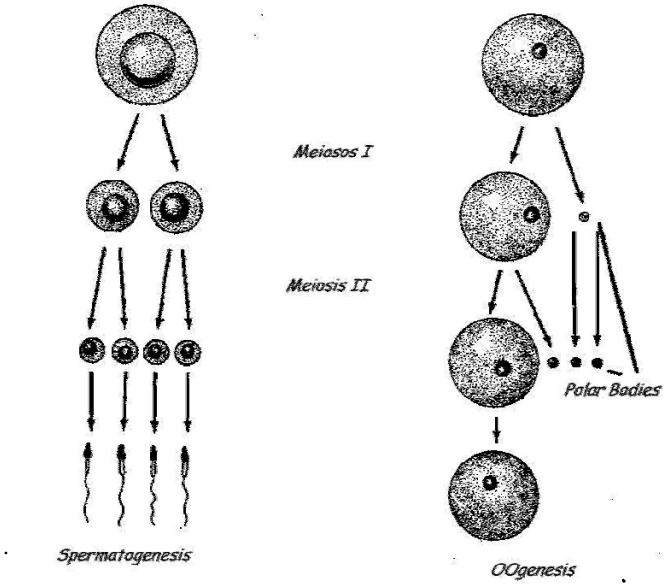


- Label the sister chromatids in the first diagram with an S.
- Label the homologous chromosomes in the last diagram with a ⟷

How is the chromosome number different between mitosis and meiosis?

Use the diagram to the right to answer the following questions.

- Where does each take place?
- How are the similar?
- How are they different?



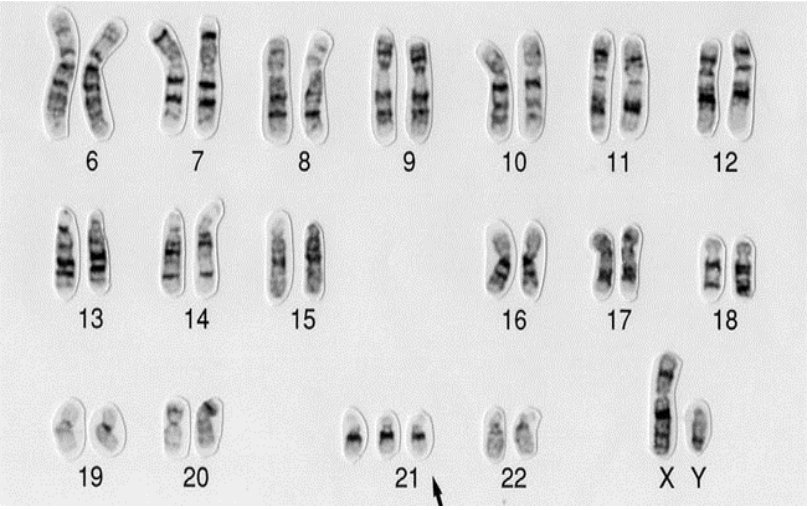
Genetic Disorders

What is this a picture of?

This process will allow you to see abnormalities in:

Is this a male or female?

What genetic disorder does this person have?



What caused this person to have this or any other disorder resulting from an abnormal number of chromosomes?

Describe an amniocentesis and what it can be used for?

Briefly describe the following;

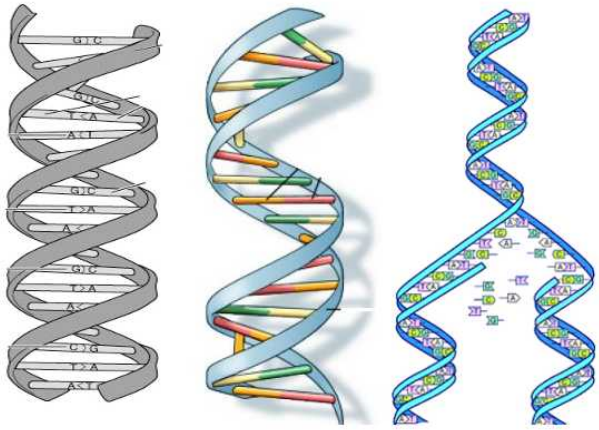
Cystic Fibrosis-

Sickle Cell Anemia-

Hemophilia-

Down Syndrome-

DNA and DNA Replication



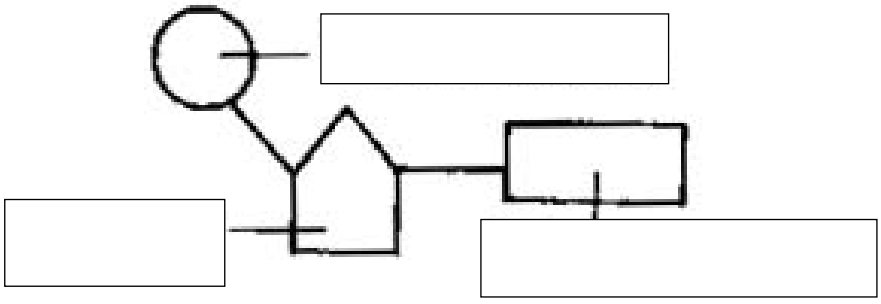
What can be said about this molecule?

What is the molecule on the right doing? Where does this process take place?

What can a change in the base sequence of the DNA cause?

What two men get the credit for discovering the structure of DNA?

On the following diagram, label the phosphate group, the deoxyribose sugar and the base.



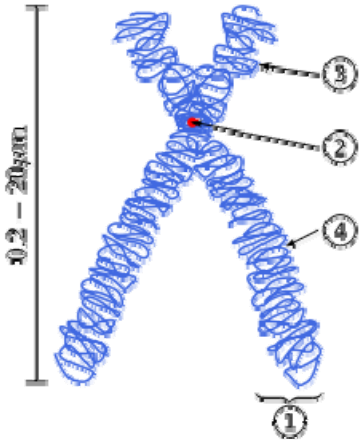
If you have an original sequence below, fill in the complementary bases.

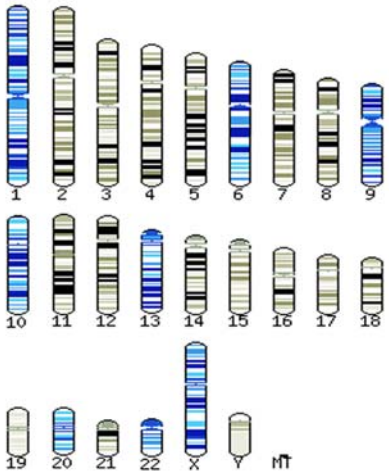
A T T G C C T A T T C

CIRCLE the deletion, SQUARE the insertion and TRIANGLE the substitution.

A T T G C C G A T T C A T T G C T A T T C A T T G C C T A T T T C

What do these this picture represent?

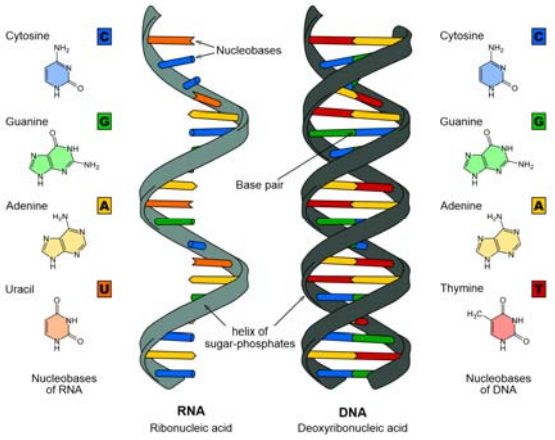




Draw the relationship between a cell, nucleus, chromosome and a gene.

Protein Synthesis and RNA

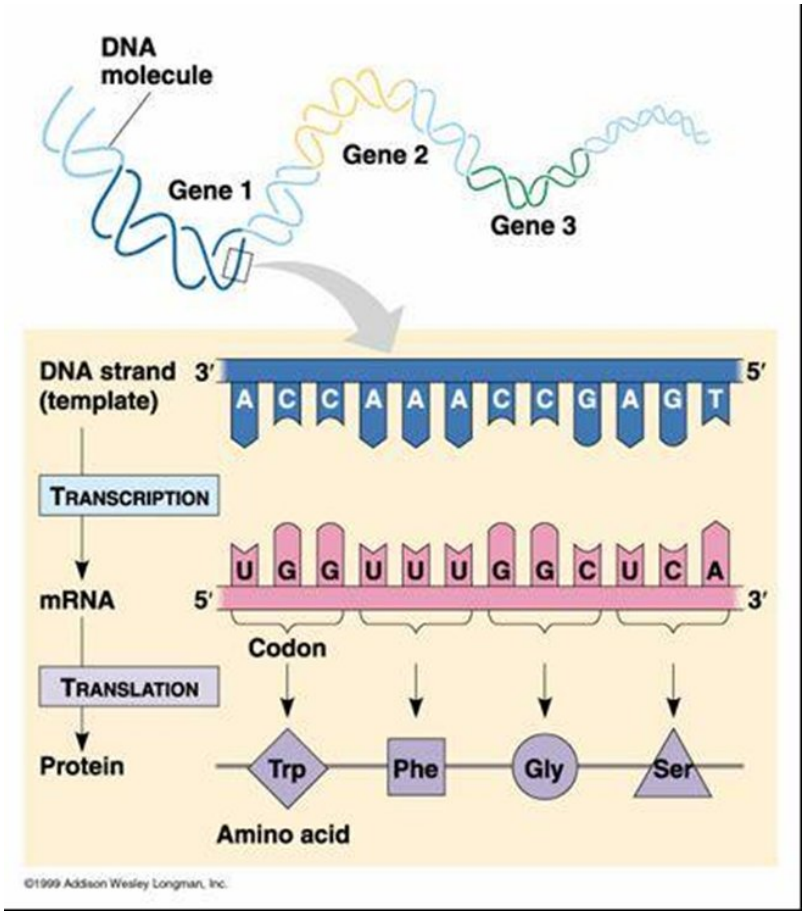
Where does the transfer of genetic material
take place between the DNA and the RNA?



What is that process called?

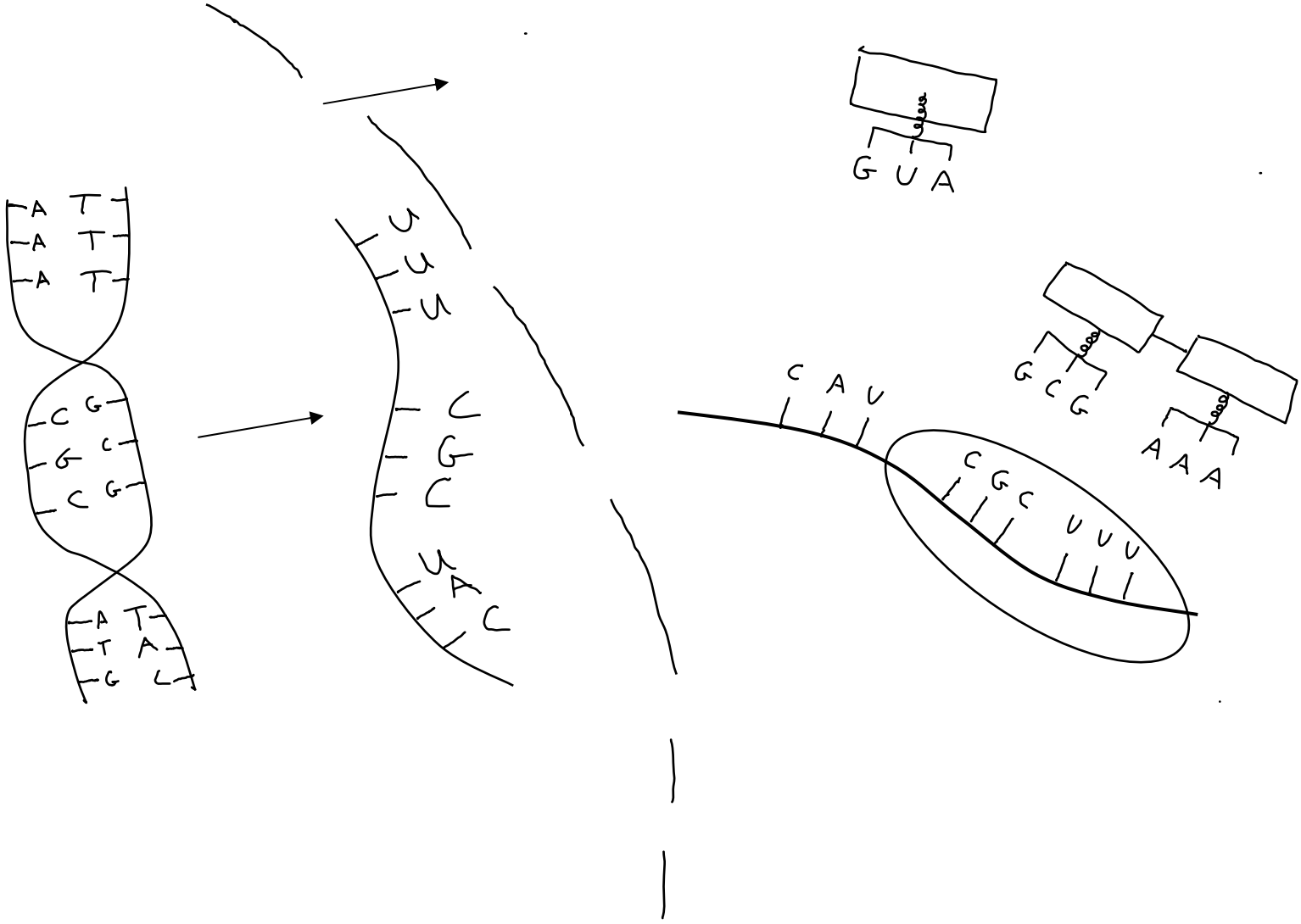
What is the relationship between cells, DNA and the protein?

What happens if there is a mutation (error) in the DNA in this process?



Label the following in this diagram:

DNA, Protein, mRNA, Amino Acid, Peptide Bond, tRNA, Cytoplasm, Nucleus, Ribosome, Transcription, Translation and Nuclear Membrane



Mendellian Genetics

What was Greggor Mendel known for?

Why was what he did so amazing?

If a given trait has two alleles that are alike (AA) it is said to be _____. If the traits are different (Aa) , they are said to be _____.

If a mother has brown hair and brown eyes and a father has blond hair and blue eyes, what could explain their child having brown hair and blue eyes?

This is an example of _____

List the ways we can write out blood types. Circle the one that shows codominance.

Punnet Square Practice

- In peas tallness is dominant over shortness. If a homozygous short plant is crossed with at heterozygous tall plant, what are the projected outcomes?

- In red snapper heads, sharp teeth are dominant over dull teeth. If two heterozygous sharp teeth red snappers mated, what percentage of their young will have sharp teeth?