**Guided Video Notes –Objectives 51 – 52**

**Objective 51: I can describe how alleles can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Human Blood Type

There are three alleles that code for blood types

A (written as *IA*) - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B (written as *IB*) - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

O (written as *i*) –\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Fill in the table below:*



Human Blood Type

* A person who inherits an *IA* allele from one parent and an *IB* allele from the other parent will have type \_\_\_\_\_\_\_ blood

Questions

1. **A woman with Type O blood and a man who is Type AB are expecting a child.  What are the possible blood types of the kid?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_% will be heterozygous for type A

\_\_\_\_\_\_\_\_\_\_\_\_\_\_% will be heterozygous for type B

1. **What are the possible blood types of a child who's parents are both heterozygous for "B" blood type?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_% will be heterozygous for type B

\_\_\_\_\_\_\_\_\_\_\_\_\_\_% will be homozygous for type O

Traits controlled by several genes

* You don’t just have a tall gene or a short gene….
* In fact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is controlled by 4 different genes.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is also controlled by multiple genes

**Objective 52: I can make a pedigree chart to determine how traits were passed down through generations**

* Pedigree charts show a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an individual
* They can be used to study the transmission of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_condition
* They are particularly useful when there are large families and a good family record over several generations.

Symbols used in pedigree charts - ***Draw in the symbols***

Organizing the pedigree chart

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_chart of a family showing 20 individuals

Generations are identified by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Draw a pedigree of your immediate family showing your parents and your siblings