

- a) Is used to determine if the fetal has genetic abnormalities that could cause a disability.
- b) Small amounts of amniotic fluid which contains fetal tissue is sampled from the amniotic sac surrounding the fetus.

Chorionic villi sampling:

- a) Determines chromosomal or genetic disorders in the fetus.
- b) Sampling the placental tissue and testing it for chromosomal abnormalities
- c) Preferred before 15 weeks
- d) Often used to test for down syndrome

Newborn screening:

- a) Screening infants shortly after birth for a list of treatable conditions.

## Chapter 12: Morgan and the Chromosomal Basis of Inheritance

1. Summarize Morgan's experiment that enabled him to discover sex-linked traits:

- a) Used fruit flies
- b) The flies have 4 sets of chromosomes that are easily seen. 3 autosomal sets, one set of sex chromosomes
- c) Morgan found a male fly with white eyes instead of the usual red, and then bred the fly with red-eyed females. The results were that all of the females had red eyes, half of the males had red eyes and the other half had white eyes. From this, Conclusion was that the eye color of the fly is sex-linked

2. Explain the connection between recombinants and crossing over:

- a) Recombinant chromosomes are the chromosomes that have crossed over. They cause recombinant offspring, which are the offspring that have the chromosomes that crossed over and therefore have traits from both parents.

Be able to map a chromosome using recombination frequencies. Solve problems 3,4,6-9 on page 244.

Fully understand the Chi-Square Test to help determine if genes are linked or not. Solve Scientific Skills Exercise on page 238.

Describe what is meant by a sex-linked trait. What are some examples of these traits? Solve Problem #1 and #5 on page 244.

- a) A sex-linked trait is a trait that is found on the sex chromosome. Examples are Hemophilia, colorblindness, and Duchene's muscular dystrophy.
- b) The Y chromosome is somewhat useless for genetic information. Since males get one X and one Y chromosome, they don't have the second X chromosome