By the end of this unit you should be able to;

1. Define the term ‘hermaphrodite’.

2. Explain how for some species environmental rather than genetic factors determine sex and sex ratio e.g. reptiles and egg incubation temperature.

3. Name factors which may cause an individual to change sex.

4. Describe the sex chromosomes found in live-bearing mammals and some insects including, *Drosophila*.

5. Explain that in live-bearing mammals, the heterogametic male lacks homologous alleles on the smaller Y chromosome which results in sex linked patterns of inheritance.

6. Work through genetics case studies and be able to use the terms carrier females and affected males.

7. Describe why it is important that in females the portions of the X chromosome that are lacking on the Y chromosome are randomly inactivated in one of the homologous X chromosomes in each cell.

8. Explain why carriers are less likely to be affected by any deleterious mutations on the X chromosomes.